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Anthropology

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Volume 72

HISTORIC INGALIK SETTLEMENTS ALONG THE YUKON, INNOKO, AND ANVIK RIVERS, ALASKA

JAMES W. VANSTONE

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FIELDIANA: ANTHROPOLOGY

A Continuation of the

ANTHROPOLOGICAL SERIES

of

FIELD MUSEUM OF NATURAL HISTORY

VOLUME 72



FIELD MUSEUM OF NATURAL HISTORY
CHICAGO, U.S.A.

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YUKON, INNOKO, AND ANVIK RIVERS, ALASKA

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March 30, 1979

Publication 1296

Library of Congress Catalog Card No.: 78-60830

ISSN 0071-4739

PRINTED IN THE UNITED STATES OF AMERICA

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PREFACE

This study describes a series of historic archaeological sites along the lower-middle Yukon River and its tributaries in west-central Alaska. Changing settlement patterns in the area during the nineteenth and early twentieth centuries are reconstructed and an assessment is made of the factors responsible for changes with a view to determining the manner in which cultural institutions are reflected in settlement configurations. Comparisons are also made with data on Eskimo settlement patterns in southwestern Alaska. The specific methodology on which this study is based is discussed in detail in the introduction.

The two seasons of field research on which this study is based were supported financially by the Wenner-Gren Foundation for Anthropological Research (1972) and the James R. Getz Fund of Field Museum of Natural History (1974). In Alaska the following individuals were particularly helpful in contributing logistic support and time and effort toward the assemblage of the historical and ethnographic data utilized in this study: Mr. and Mrs. Charles Lucier, Anchorage; Dr. Mim Harris Dixon, College; Mr. Adolph Hamilton, Mr. Hamilton Hamilton, the late Mr. Joseph Hamilton, and Mrs. Mathilda Dutchman of Shageluk; Mr. Henry Deacon and Mr. John Deacon of Grayling; Mr. and Mrs. Terrance Wharton, Mr. Terrance Wharton, Jr., Mr. Marcus Maillele, Mr. Wilson Maillele, Mr. Calvin Chase, and Mr. Lucius Young of Anvik; also Mr. and Mrs. James Fullton, formerly associated with the Episcopal Church in that village.

For assistance in obtaining much of the historical material on which this study is based, I wish to express my appreciation to the following individuals and institutions: Mr. Max Plaut, formerly reference librarian, Field Museum Library; Mr. Paul McCarthy, archivist, and Mrs. Renee Blahuta of the archives staff, Archives and Manuscript Collections, University of Alaska, Fairbanks; Mrs. Phyllis De Muth, librarian, State Historical Library, Juneau; Father

Clifford Carroll, archivist, Oregon Province Archives of the Society of Jesus; Ms. Elinor S. Hearn, assistant to the archivist, Archives and Historical Collections, the Episcopal Church.

Dr. Wendell H. Oswalt, University of California, Los Angeles read an early draft of the manuscript and offered useful suggestions and critical comments of a specific nature. It is with considerable gratitude that I acknowledge his valuable assistance. Drafts of the manuscript were typed by Mrs. Sylvia Schueppert and Mr. Jim Hanson. The maps were drawn by Mr. Zbigniew Jastrzebski.

ABBREVIATIONS

AROCA	Archives of the Russian Orthodox Church in Alaska
ECA	Archives and Historical Collections, the Episcopal Church
HCM	Holy Cross Mission
OPA	Oregon Province Archives of the Society of Jesus
RACR/CS	Russian-American Company Records: Communications Sent
UA	Archives and Manuscript Collections, University of Alaska, Fairbanks

INTRODUCTION

*The Lower-Middle Yukon and its Inhabitants*¹

The region of west-central Alaska with which this study is concerned includes a section of the lower Yukon River between Shageluk Slough on the north and the mouth of the Innoko River on the south. Also included are the drainage systems of the Anvik River, a locally important western tributary of the Yukon, and the lower Innoko River, the only significant Yukon tributary entering on the left or east bank. The entire area is part of a physiographic region characterized by one geologist as the Innoko Lowlands consisting, for the most part, of flat river flood plains (Wahrhaftig, 1965, p. 30).

For the purposes of this study, the area is divided into four sections: the Innoko River to its confluence with the Iditarod including Holikachuk and Shageluk sloughs, but excluding the mouth of the Innoko; the Anvik River from its mouth to Otter Creek and the Yukon in the immediate vicinity of Anvik village; the Yukon River from Deadman's Slough to and including the mouth of the Innoko River. Geographical details of this extensive region and contiguous areas are presented in the chapters that follow. In considering the physiography of the Innoko Lowlands as a whole, however, important factors are the presence of numerous navigable rivers which have played a dominant role in the culture of the native inhabitants and the virtual absence of high mountains and large lakes. The rivers have provided access to major sources of food and have also facilitated communication between villages built along their banks. Similarly, they were avenues to the interior of central Alaska, first for Russian explorers, traders, and missionaries and then for their American counterparts as well as for subsequent gold seekers.

This geographical area is occupied by the Anvik-Shageluk Ingalik, an Athapaskan-speaking people who, at the time of their first direct contact with Europeans in the late eighteenth or early nine-

¹Most of this section has been summarized from VanStone, 1979.

teenth centuries, were one of four subdivisions of Ingalik living along the lower-middle Yukon, lower Innoko, and a small portion of the Kuskokwim River drainage (Osgood, 1940, p. 31). Several settlements of Holikachuk Athapaskans, neighbors of the Ingalik on the upper Innoko River (Krauss, 1974), are also included in the area of this study. Total population of the region occupied by these two groups may have been as high as 2,000 at the beginning of the historic period, but this number was greatly reduced, perhaps by as much as two-thirds, as the result of a severe smallpox epidemic that swept southwestern Alaska in 1838 and 1839. At the beginning of the present century they numbered approximately 500.

The neighbors of the Anvik-Shageluk Ingalik include Eskimos as well as other Athapaskan speakers. West of the Anvik River and its tributaries is the territory of the Unaligmiut Eskimos who inhabit the coast of Norton Sound and the banks of the short rivers flowing into it. Contact and trade between the Ingalik and Eskimos was important in this area. Kwikpagmiut Eskimos live along the Yukon River south of Holy Cross to the river mouth. The only Athapaskan group directly in contact with the Anvik-Shageluk area are, as just noted, the Holikachuk, who today live along the Yukon River in the village of Grayling. Because of frequent interaction with the Ingalik, the Holikachuk, most of whom formerly occupied the recently abandoned village of that name on the Innoko River, are culturally aligned to the Anvik-Shageluk people.

Ethnohistoric sources and the extensive field work of Cornelius Osgood in the 1930's (Osgood, 1940, 1958, 1959) indicate that the nineteenth-century Ingalik wintered at permanent villages along the Yukon and Innoko rivers. In the spring small hunting parties left the settlements to hunt caribou and moose in the high country to the east and west. Beaver and muskrat were trapped in April. At the first appearance of open water in the small lakes and ponds which dot the lowlands of the river valleys, usually by mid-May, ducks and geese were hunted as they migrated north. Spring fishing for whitefish was also an important activity in the vicinity of the river villages. Late spring was the time of trading expeditions to the coast in the early contact period. Trading parties of Eskimos from Norton Sound came to the Yukon and the Ingalik traveled to the coast, usually by way of the Anvik River.

Salmon fishing was the most important subsistence activity during the summer and by the time the rivers were clear of ice, the Indians had moved to their summer fish camps which were usually

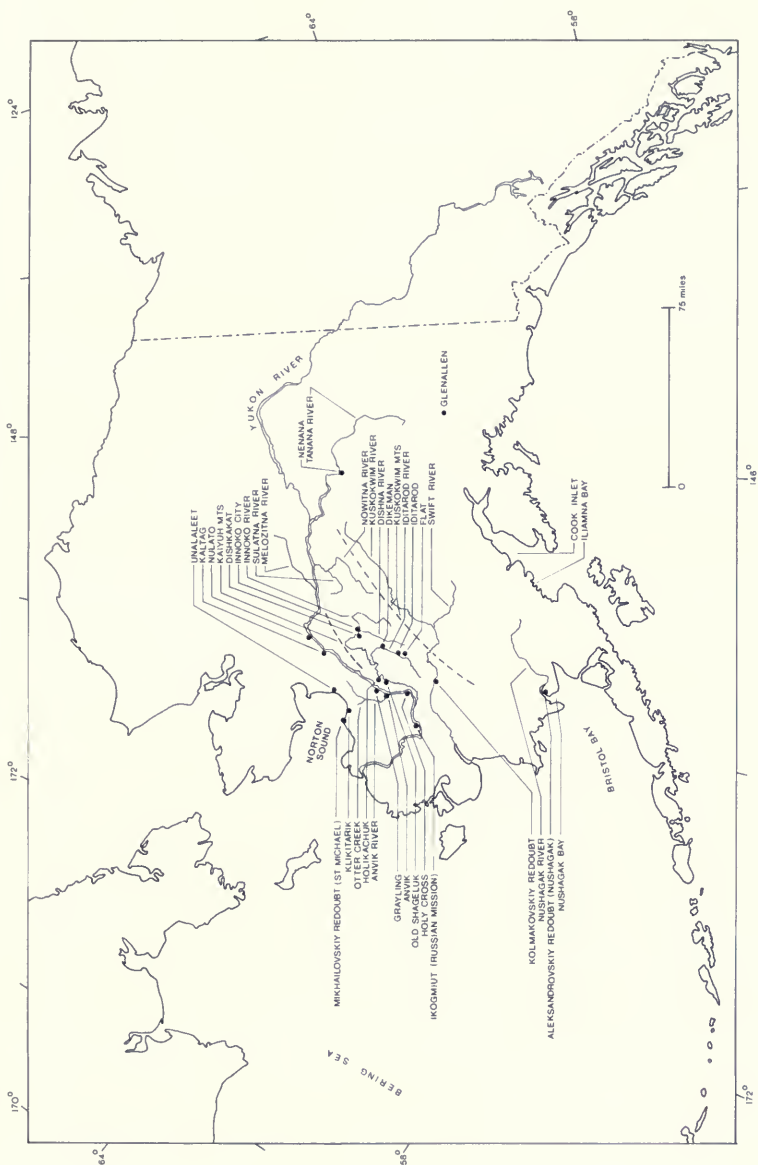


FIG. 1. Map of Alaska.

located near or adjacent to the permanent settlements. Ducks and geese were also hunted throughout the summer and berries gathered in the late summer and early fall. Shortly before the close of navigation on the rivers in late October, the people returned to their permanent villages to prepare for late fall and early winter hunting and trapping. Whitefish and lampreys were taken through the ice and men went off to the high country seeking large game. By the end of November, most hunters had returned to the villages and trapping continued at least until the end of December. Small game hunting and fishing for whitefish and pike continued throughout the winter. Lavish winter entertainments and festivals took place during the coldest months when outdoor subsistence activities were, of necessity, greatly restricted.

The Russian fur trade on the lower Yukon began with the establishment of Mikhailovski Redoubt (St. Michael) northeast of the river's mouth in 1833 and the penetration of the Yukon Valley by Andrey Glazunov's expedition the following year. Additional posts were established at Ikogmiut in 1836 and Nulato on the middle river in 1838.

At first, the fur harvest was abundant and meaningful economic ties were established with the Ingalik and their neighbors. Soon, however, the number of furs began to diminish, primarily because the Russians had insufficient knowledge concerning the country, the traditional economic patterns of its native inhabitants, and the efforts necessary to develop new patterns that would benefit the Russian-American Company. In spite of the presence of a number of trading posts in west-central Alaska, the native inhabitants continued to depend on their Eskimo neighbors to the north who maintained direct contact with the Chukchi who had access to supplies available from Siberian trading posts on the Kolyma River. For more than 30 years the Russian-American Company struggled to turn the fur trade to its own advantage, but was unsuccessful by the time the country was relinquished to the United States in 1867.

During the early American period, the Ingalik benefited from competition between the Alaska Commercial Company, successor to the Russian-American Company, and the Western Fur and Trading Company, but following the collapse of the latter in 1883 the situation changed drastically. Prices paid for furs were forced down and the Indians' greater dependence on European goods, together with a decline in numbers of fur-bearing and some large game animals, gave traders the power and authority lacking earlier.

The introduction of commercial fur trapping necessitated a reorientation of Ingalik ecological and social patterns. As we have noted, the aboriginal seasonal ecology of the Indians involved periods of both dispersal and aggregation and the fur trade accentuated the degree and duration of social isolation in every season of the year except summer. Most fur bearers had been of little significance to aboriginal subsistence and the effective deployment of trappers to harvest thinly distributed furs was different from the traditional arrangements utilized to take caribou, moose, small game, and fish. Only the summer fishing season was unaffected by the demands of the fur trade, a fact that doubtless insulated the Ingalik from some of the hazards of an economy based primarily on trapping.

Beginning in 1845 with the establishment of a Russian Orthodox mission at Ikogmiut, traditional Ingalik religion was confronted by a small but highly dedicated group of church workers who became increasingly significant as agents of culture change. The first Orthodox priests were able to make infrequent visits to most of the widely dispersed villages and this restricted their influence. Isolated by the departure of the Russian-American Company in 1867, Orthodox Church representatives were poorly equipped to withstand the determined intrusion of Episcopalian and Roman Catholic missionaries 20 years later. Both denominations sent workers into the area in 1887, the former at Anvik and the latter at Holy Cross opposite the mouth of the Innoko River.

These missions, of course, emphasized programs aimed at changing the religious views of the people, but their efforts also affected virtually every other aspect of Indian life as well. Educational programs opened up a new world to village young people and helped them learn English, a valuable asset as face-to-face contacts with Euro-Americans steadily increased. Traditional concepts of proper social behavior were undermined and new concepts introduced since both Episcopalians and Roman Catholics stressed the necessity of living a Christian life, not just adhering to a new set of religious practices. In the early years of the missions the authority of the missionaries became virtually complete since they controlled education, medical services, and other areas of access to the outside world. After the turn of the century, as the United States government assumed greater responsibility for services in the communities, the missionaries gradually became less significant as an acculturative force. The effects of the missions and schools on settlement patterns in the Anvik-Shageluk area is examined in the concluding chapter.

An influx of miners into the Yukon Valley began with the Klondike gold rush in 1897 and continued until the decline of diggings on the upper Innoko River just prior to 1920. As a result, new and abundant opportunities for interaction with outsiders were presented to the Ingalik. For the first time, the Indians had an opportunity to observe Euro-Americans other than traders and missionaries. In the early years of the Klondike stampede, Indians worked on river boats as deck hands and pilots. Although they were soon forced out of these jobs by whites, employment as wood choppers supplying fuel to the river boats continued to be available. The conversion of river boats from wood to oil began in 1903 and following the collapse of the Innoko diggings, the volume of river traffic declined drastically. This meant that the Ingalik were forced once more to rely primarily on income derived from trapping. The gold rush was responsible for bringing about major seasonal fluctuations of population and the establishment of wood camps at strategic locations along the lower-middle Yukon and the Innoko.

Methodology

Methodologically, the research on which this study is based involves three techniques: 1) archaeological survey; 2) ethnography; 3) historical investigations. With reference to the survey, a total of 60 sites are numbered and reported on in the following pages including four still occupied and 10 that have either disappeared because of changing configurations of the river or, although physically intact, were not personally visited or observed. Information concerning the latter was either reported to me by informants or obtained from historical sources. Speculations concerning the location and nature of several additional settlements are also included. A great majority of sites, however, were visited by boat, usually in the company of a local resident who provided some on-the-spot ethnographic data. These visits varied in length from a few minutes to the better part of a day. Some sites were visited twice and a few were seen only from the river, a landing being impossible at the time.

Most sites along the Yukon and its tributaries conform to the same general pattern. They are located along a present river bank and are easily visible as relatively open areas covered with a thick growth of very tall grass, willows, and other scrub vegetation. Many, perhaps most, have been partly eroded by river action. The tall grass and other vegetation covering most sites often made it difficult to obtain an accurate identification and count of the individual house pits and other features. Sites along the Innoko and lower

Anvik rivers were less easily visible than those on the Yukon because of particularly thick willow growth near the river bank. In the early summer of 1972, when most of the Innoko survey was conducted, extensive flooding made the location of former settlements or camps especially difficult.

The absence of sizeable midden deposits was characteristic of all sites in the region. Since the research was oriented toward former settlements belonging to the historic period, no attempt was made to locate prehistoric sites or establish the extent of precontact occupation. Since no excavation or testing was undertaken, it is not known which, if any, of the readily identified historic sites had prehistoric components. It is my impression, however, that evidence for prehistoric occupation would be difficult to determine because of the unstable banks of the Yukon and its major tributaries that have, occasionally, changed dramatically in the course of a single year.

The task of discovering and collecting information about historic settlements was greatly facilitated by the willingness of Indian and white residents of the area to share their knowledge concerning the location of sites, as well as to provide supplementary information about such aspects of settlement patterns as span of occupation and reasons for abandonment. There are four currently occupied villages in the area of the Yukon drainage covered in this study; Anvik (HC-14), at the mouth of the Anvik River; Grayling (HC-35), about 20 miles above Anvik, established in 1963 on the site of an old settlement by the former residents of Holikachuk (HC-9) on the Innoko; Holy Cross (HC-54) opposite the mouth of the Innoko River; and New Shageluk on the Innoko about 45 river miles above its mouth.

Residents of Anvik are familiar with the Yukon between Fox Point Island and the mouth of the Innoko River, but particularly the section of the river above their village where, in the past, many families maintained fish camps. The Anvik River was also the location of fish and trapping camps as well as an overland route to Norton Sound used frequently in the late nineteenth and early twentieth centuries. The residents of Grayling could be counted on to provide information about settlements on Shageluk and Holikachuk sloughs and that section of the Innoko in the vicinity of their former home at Holikachuk, as well as on the Yukon near their present village where Holikachuk residents had traditionally maintained summer fish camps. Elderly informants at Holy Cross were likely to be familiar with the lower Innoko River as well as the region in the vicinity of their village, while at New Shageluk there were a few individuals

who had traveled extensively on the Innoko and its tributaries and were also knowledgeable concerning the rather complicated settlement patterns of the Innoko between Shageluk Slough and the mouth of the river.

Although a large number of Indians and whites from all villages in the area were helpful, the most profitable information was obtained from a group of about 10 elderly and middle-aged men and women whose memories were remarkably accurate for the years between about 1910 and 1930. There were, however, fewer informants with decided historical interests than I encountered in carrying out a similar project in the Nushagak River region in the mid-1960's. Unlike my experiences with informants in Nushagak communities, relatively little information was obtained from Ingalik informants in response to the mention of settlement names derived from previous studies of historical sources. My Ingalik informants were equally as co-operative as those in Nushagak area villages, but these names simply did not stimulate their memories to the same extent and this study suffers accordingly.

With reference to the historical sources, both published and archival, utilized in the preparation of this study, a few comments may be helpful. Without a doubt, the most useful published source has been deLaguna's (1947) archaeological survey of portions of the Yukon River and its tributaries undertaken in the summer of 1935. Her surveys included all the area with which this study is concerned and she visited and described many of the sites which I located almost 40 years later. Her account of settlement patterns includes reference to virtually all the published source material available at the time as well as some archival sources, and she also mapped and test excavated the more important sites. It has been almost impossible to improve on deLaguna's careful work and if I have been successful in doing so, it is because I have made use of archival materials which, because of the much wider scope of her study, it was not feasible for her to consult. Hrdlička's (1944) entertaining account of his Yukon surveys in 1926 and 1929 has also been useful. Other published sources to which reference has been made in the following pages are, of course, listed in the bibliography and do not require comment at this point. It is worthwhile to note, however, the many published articles by John Wight Chapman, pioneer Episcopalian missionary at Anvik, which often contain brief but valuable comments on settlement patterns and related subjects. Dr. Chapman traveled extensively throughout the lower-middle Yukon-lower

Innoko area and was an astute observer of Indian life for more than 40 years.

Concerning archival sources, the Archives and Historical Collections of the Episcopal Church contain letters and unpublished writings by Dr. Chapman and others associated directly or indirectly with the mission at Anvik. These materials have been utilized in the preparation of this study. Of equal importance are documents related to the Roman Catholic mission at Holy Cross deposited in the Oregon Province Archives of the Society of Jesus. Among these, the most useful have been the mission diaries maintained almost continuously by the priests between 1889 and 1936. At one time or another they contain references to most of the settlements and camps within the area covered by this study.

In the chapters that follow, the procedure will be to describe the various archaeological sites of the historic period as determined, for the most part, during surveys in the summers of 1972 and 1974. When available, evidence will be presented concerning length of occupancy and population. An attempt will also be made to relate a given site to those around it.

In conclusion it is necessary to refer to the site designation system used in this study, a system which utilizes the 1:250,000 U.S.G.S. topographic quadrangle as an areal base equivalent to the county in other states (Hadleigh-West, 1967, pp. 107-108). Under this system quadrangle names are abbreviated and joined with the prefix "49" to form a trinomial that is similar to the system employed by the Smithsonian Institution. Virtually the entire area with which this study is concerned is encompassed by a single quadrangle map: Holy Cross (HC). A few sites are located within the area covered by the Unalakleet (Ukt) and Ophir (Oph) quadrangles. Since "49" is the prefix for all Alaska, it is eliminated from the site descriptions here to avoid repetition. Thus the total designation will include one of the abbreviations listed above together with a number.

The sites and occupied settlements will be described according to convenient and logical subdivisions of the total region. A subdivision may include more than one quadrangle map and when that occurs sites will not be designated in continuous numerical order. The names of settlements and camps, when they are definitely known, will be included with the appropriate abbreviations and numbers.

I

SETTLEMENTS ON THE INNOKO RIVER AND SHAGELUK SLOUGH

Introduction

In this chapter archaeological sites on the lower Innoko River, exclusive of those at the river's mouth, and on Shageluk Slough will be discussed. Sites at the mouth of the Innoko are more closely related to settlement configurations on the Yukon and will be considered in Chapter IV.

Just below the present-day village of Holy Cross and on the opposite river bank is the mouth of the Innoko River, fourth longest tributary of the Yukon. The Innoko is approximately 500 miles in length, and, together with its numerous tributaries, drains an area in excess of 10,000 sq. miles that lies between the central and lower portions of the Yukon and Kuskokwim Rivers.

The Innoko Valley consists of two types of drainage patterns which divide it into distinct sections corresponding approximately with the lower and upper halves of the valley. The upper half, characterized by hills and low mountains, is drained by clear streams. It is separated from the Yukon Basin to the northwest by the Kaiyuh Mountains which extend from the south side of the Yukon, opposite the mouth of the Melozitna River, in a southwesterly direction to the lower course of the Innoko near the point where it is joined by Holikachuk Slough, a distance of approximately 175 miles. These mountains are comparatively low, being little more than high hills at their northeast and southwest extremities. To the southeast, the valley of the upper Innoko is separated from that of the Kuskokwim River by a range of the Kuskokwim Mountains. These mountains are higher and more rugged than the Kaiyuh, in some places rising to a height of 4,000 ft. (Maddren, 1909, pp. 242-244.)

In the lower half of the Innoko Valley the river and its principal tributaries meander widely over a considerable extent of low, flat

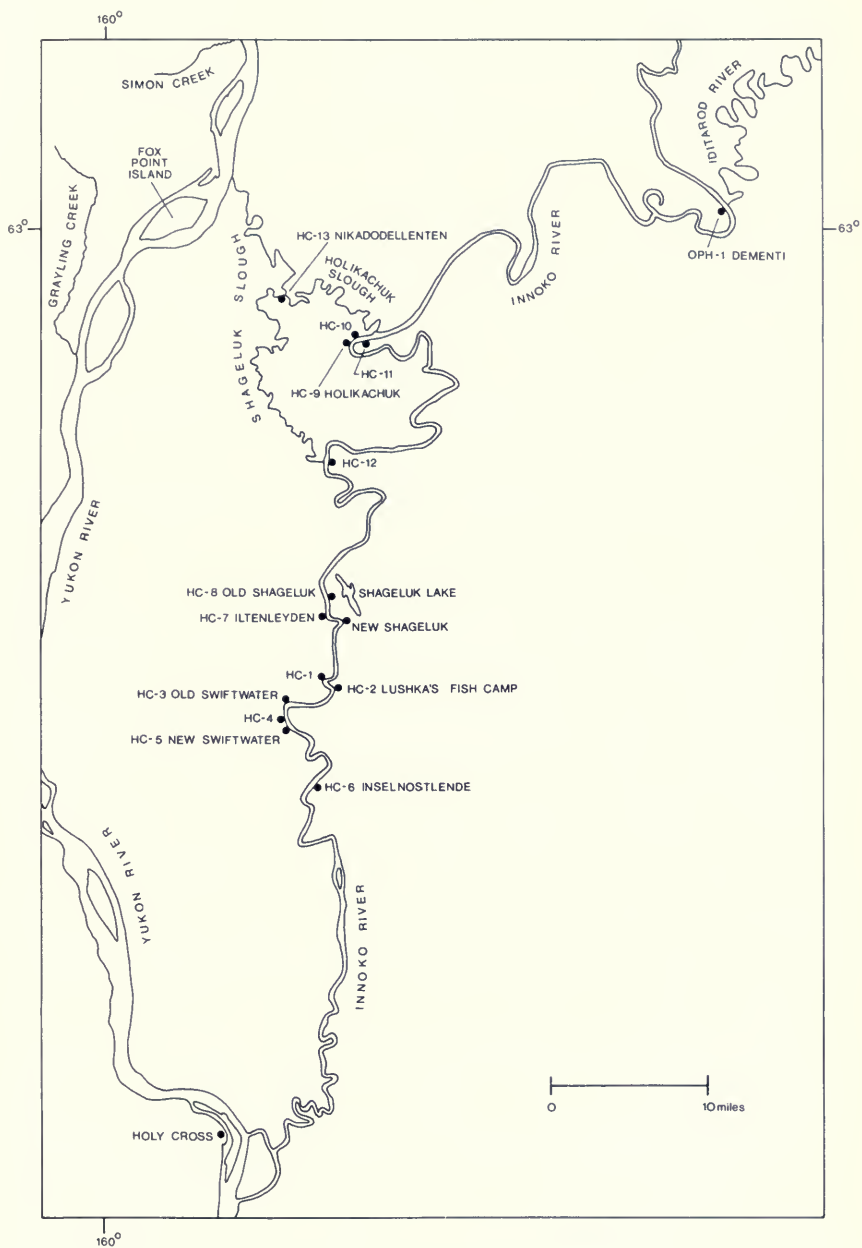


FIG. 2. Map of the lower Innoko River.

country consisting primarily of silt and clay deposits. Where the river emerges from the upper valley at approximately its confluence with Holikachuk Slough, the banks are about 10 to 15 ft. above the normal level of the river. Here and there, as it makes its way toward the Yukon, the river cuts banks of silt that are from 20 to 35 ft. high and even higher hills approach the east bank below the village of New Shageluk. Generally speaking, however, the banks tend to decrease in height downstream and toward the mouth they are sometimes no more than 3 or 4 ft. above low water level. During spring floods the entire lower valley is sometimes inundated with only an occasional hillock rising above the water level and only tall river bank vegetation to indicate the normal channel.

About 75 miles above its confluence with the Yukon, the Innoko is joined to the latter by Shageluk Slough, an anabranch which runs in a meandering north-south direction generally parallel to the two rivers for a distance of some 40 miles and joins the Innoko approximately 15 river miles above the village of New Shageluk. A branch of Shageluk Slough, Holikachuk Slough flows into the Innoko near the abandoned village of Holikachuk.

A glance at the map (fig. 2) will show that Shageluk Slough, together with the lower Innoko River, creates a large island roughly in the shape of an inverted triangle with Fox Point Island in the northwest corner, Holikachuk in the northeast corner, and Holy Cross at the apex. This arrangement has created confusion in geographical naming and identification by early explorers, traders and missionaries. In some written accounts Shageluk Slough is considered to include not only the slough, but the lower Innoko as well. For these writers the name Innoko is applied only to the river above the mouth of Holikachuk Slough. Since in spring both sloughs deliver a considerable amount of Yukon water to the Innoko, it is easy to see why some observers considered the entire complex of sloughs and a section of the Innoko to be simply a large anabranch of the Yukon.

According to the explorer L. A. Zagoskin (1967, pp. 201, 298), the upper Innoko was called "Tlëgon" by the Ingalik and the middle river "Shiltonotno or Innoko." The lower river between the point where Holikachuk Slough enters and its junction with the Yukon was designated "Ittege" by the Indians and "Chagelyuk" or Shageluk by the neighboring Eskimos. Zagoskin believed the name Shageluk to mean "willow," a reference to the heavy growth of these trees along the river's banks, while according to one source (Osgood,

1958, p. 27), Innoko is an Ingalik word meaning "in the woods." Father Jules Jetté (1907, p. 178), an early Roman Catholic missionary at Nulato and long-time student of Indian culture, however, insisted that the name is not Ingalik and there is no general agreement concerning the meaning of this designation or its origin.

Site Descriptions

HC-1. This is probably the site referred to by Osgood (1958, p. 29) as "Sleep on the other side." In 1956, at the time of his visit, it was entirely overgrown with willows. According to my informants, the name of the village means "across (or opposite) the hill," and there is, in fact, a sizeable hill, known locally as St. Joe Hill, just opposite the site. An elderly Shageluk resident, 77 years old in 1972, said that he had been born in this settlement and that when he was a boy there were many people living there. His parents were also born there which suggests that the site dates at least to the early nineteenth century. Other informants noted that this settlement was occupied until about 30 years ago and some could remember two standing cabins that have been cut away by the river within the past 20 years. The river bank is quite low in the vicinity of the site and the same thick growth of willows noted by Osgood was observed in the summer of 1972. No structures or the remains of structures could be identified and it is likely that much of the formerly occupied area has been cut away. Informants reported that the site was near a good fishing location for dog salmon and that many people lived there in tents during part of the summer. There is reported to have been a cemetery in the vicinity, but it could not be located.

HC-2. According to its present appearance, this site, known locally as Lushka's Fish Camp, has been seasonally inhabited very recently, but informants noted that it has served as a good fishing location for many years. Like HC-1, it is said to be one of the few locations along the Innoko for taking dog salmon, the only species ascending the river in sufficient numbers to constitute a run. At the present time there is a small frame cabin and large drying rack at the site, but no other signs of occupation. This may be at or near the "village" referred to by Osgood (1958, p. 30) as "Branches to put in one place," which he described as covered with impenetrable willows at the time of his visit.

HC-3. The identification of this site is very tentative. It may be the one referred to by Zagoskin as "Khuingitetakhten," which, in 1844, had a population of 37 living in three houses (Zagoskin, 1967,

p. 307). A map of Alaska published in 1867 and based on Russian charts, as well as surveys by the Western Union Telegraph Company Expedition (Map of Russian America . . . , 1867), shows a village on the Innoko called "Hoeingitetakhten," but the location seems incorrect.

If the above identification is correct, this site was occupied at least as early as the beginning of the nineteenth century. Informants refer to it as "Old Swiftwater," a name also mentioned by Osgood (1958, p. 30), although he appears to have confused its location with that of HC-6. John Chapman visited a village called "Quoloqutchiaku," tentatively equated with HC-3, in 1931 but the definite date of abandonment is unknown. The site is located opposite an island on a low bank that separates the Innoko from a small lake. Only a collapsed cabin could be seen and much of the site now appears to have been cut away.

HC-4. According to informants, the Ingalik name for this site means "Spruce tree slough." Two families are said to have lived here as recently as 30 years ago and the remains of two cabins were visible in 1972. The site was frequently described as one where many inhabitants died during influenza epidemics between 1900 and 1919. Today the area of former occupation appears low, flat, and not more than 4 ft. above high water level. Informants believed that the site, a year-round settlement, dated to the early nineteenth century with the few remaining inhabitants eventually moving to Old Shageluk.

HC-5. Informants identified this site as "New Swiftwater," but the relationship to Old Swiftwater is not clear since the date of abandonment of the latter is not known. This is a comparatively large site with the remains of at least four cabins and one large old style house pit, its entry tunnel facing downriver. Also visible are the remains of a structure, approximately 15 ft. square, which informants described as a *kashim* in use within the past 35 years. Like other sites in the immediate vicinity, this one is a low, flat, grass-covered area surrounded by a thick growth of willows. Much of it appears to have been cut away by the river. About 1 mile below New Swiftwater and on the same side of the river is a cemetery; the graves are rapidly being washed out. The village was occupied in 1938 when it had a population of 14 (Anonymous, 1938, pp. 1-2) and there were still a few inhabitants as late as 1946 (Chapman, 1945, p. 10; Anonymous, 1947, p. 19).

HC-6. This is the location of a village which Father Jules Jetté (On the geographic names of the Tena, OPA) called "Ekarotsor" meaning "big eddy." As noted previously, Osgood appears to have confused this site with that of Old Swiftwater (HC-3). Its appearance in 1972 suggests that it is one of the oldest along the lower Innoko. The remains of three old style houses are visible, their entry tunnels facing in different directions. The remains of two small log cabins and two elevated caches were also observed. The site is on a low, narrow spit of land next to a slough and, like so many others on the lower Innoko, much of it appears to have been cut away by the river. A cemetery is located a short distance above on the same side of the river and on slightly higher ground.

It seems likely that this is the site identified by Zagoskin as "Inselnostlende" which, in 1844, had a population of 33 living in two houses (Zagoskin, 1967, p. 307). His maps (Zagoskin, 1967, p. 84, opp. p. 358) show it on the right bank, but the general location is approximately correct for HC-6. Informants stated that this settlement had been occupied within the past 40 years, but that many inhabitants died in the influenza epidemic of 1918-1919.

HC-7. This is the site identified by Zagoskin as "Iltenleyden" and it is the largest and most impressive on the lower river. Located on the right bank about halfway between new and old Shageluk, it is probably no more than a mile from either community. The right bank of the river in this area is low, flat, and cutting rapidly. The site appears as a flat, cleared area approximately 400 yd. long and varying in depth throughout its length. At either end it tapers and is narrow, but in the center it is approximately 50 yd. deep. At the river bank the ground surface is about 10 ft. above the water level in late July. Toward the rear, the ground slopes downward and when the water level is high in spring it is likely that flooding begins in this area. It seems probable that water would stand in deep house pits almost every spring. The site is surrounded by a thick growth of willows which in some places have encroached on the formerly occupied area. Willows have also begun to grow directly along the river bank in a few places.

The formerly occupied area is divided about equally into two sections by an intrusion of willows that almost reaches the river bank. The downriver half has been occupied more recently and in this area, well toward the back of the site, are three standing cabins, the remains and foundations of several more, at least two raised caches,

several fish racks, and two collapsed smokehouses. Although there is a heavy growth of tall grass and fireweed in this area, seven or eight old style house pits could be discerned, one of which is large enough to have been a *kashim*. Entryways could not be determined for all of these, but where they occur, they face away from the river bank. There are also a large number of unidentifiable depressions of varying sizes. All the house pits are toward the front of the site on higher ground and well in front of the cabins. Two houses are very close to the river bank and it is likely that some have been cut away. This lower section of the site was still occupied in the late 1940's (Gordon, 1948, p. 11).

The upriver section of Iltenleyden contains at least six house pits, including a very large structure that was almost certainly a *kashim*. It is located well back from the bank and has a tunnel and entryway which face the river. The other structures, widely dispersed over the cleared area, do not have obvious tunnels and are not as close to the bank as the houses in the downriver section. At the extreme upper end of the site there is a small modern cemetery in which burials were made as recently as 1971.

It is difficult to discern anything particularly suitable about the location of this site, particularly since the area has obviously flooded frequently in the past. There is no obvious source of drinking water, although it is possible that a small creek may have existed somewhere in the area.

Zagoskin noted six houses at Iltenleyden and estimated a population of 100, although at the time of his visit in February, 1844 many trappers were away from the village (Zagoskin, 1967, pp. 234, 307). Elderly informants at New Shageluk believe that the upper end of the village, the section occupied in Zagoskin's time, was abandoned early in the present century. The lower end, frequently referred to as "Lower Village" with reference to Old Shageluk, was occupied at least as early as 1905 (Chapman, 1906, p. 755) and, as previously noted, up to approximately 25 years ago.

HC-8. This settlement, known today as Old Shageluk, was one of the most important on the Innoko River throughout much of the historic period. Zagoskin (1967, p. 235) called it "Tlëgozhitno," which, according to Osgood (1958, p. 29), is a close approximation of the Ingalik name meaning "rotten fish." John Chapman and other missionaries sometimes referred to Old Shageluk as Schoolhouse Village after a government school was built there about 1906.

The Old Shageluk site is located on a narrow strip of land which separates the Innoko River from Shageluk Lake. The total occupied area, narrowest (about 50 yd.) in the center and widening at either end to about 100 yd., is a little more than a quarter of a mile long. When the Innoko is low in midsummer, the houses and outbuildings are from 3 to 8 ft. above the water level with the area bordering the lake being consistently higher. As a result, known habitation has always been back against the lake shore. In general, the upriver end of the site is lowest and this area frequently floods in spring. In years of severe flooding, the entire strip of land, and consequently the village, lies submerged, the lake and river becoming a single body of water. In winter, strong winds blow across the lake, sometimes creating snowdrifts that cover the houses.

In 1966 the Bureau of Indian Affairs built a new school approximately 2½ miles downriver and the residents of Old Shageluk gradually moved to the new site. The above-mentioned flooding in spring and blowing snow in winter were other reasons which encouraged the residents to move. Although three families remained in the old village in 1972, it will clearly be only a matter of time before the entire settlement is abandoned.

Today Old Shageluk has, as might be expected, the appearance of a recently abandoned settlement or even one from which the inhabitants are only temporarily absent. At the time of the move to the new site, some houses were dismantled and the logs used for firewood or to construct dwellings in the new location. However, many abandoned cabins and the school still stand. As previously indicated, houses were built close to the lake where the presence of many birch stumps indicates that flooding was infrequent. Fish racks, smoke houses, and dog tethering places were situated on lower ground along the river bank. There may have been a summer fish camp along the bank in earlier days.

The oldest part of the site appears to be at the downriver end where the formerly occupied area slopes off into a swamp that joins the river to Shageluk Lake. There are a number of house pits in this area, but because of extremely tall grass only three could be located with certainty. Others were doubtless destroyed by the construction of cabins, gardens, and smokehouses. That the site has an archaeological component, however, is certain, both because of early references in historic sources and the fact that in 1935 deLaguna purchased artifacts found there from an Innoko River trader (deLa-



PLATE 1. Village of Old Shageluk (HC-8) about 1917 (Smithsonian Institution, National Anthropological Archives).

guna, 1947, p. 76; pl. xi, 3; xxii, 1; fig. 32, no. 4). Through the years the inhabitants appear to have moved gradually upriver.

The *kashim* at Old Shageluk still stands and is in a fairly good state of repair. It is a large building, approximately 20 ft. square, constructed of massive logs, six on a side. The roof is of split logs supported by six cross pieces and there is a skylight approximately 4 ft. square. Inside is a plank floor and a wide bench of split logs running around all four sides. This structure was constructed about 1940 and was used as a community hall until the village moved. Earlier, another and much larger *kashim* stood in the same place.

Old Shageluk would appear to have been well located in spite of previously mentioned drawbacks. It is bright and open and there is an unobstructed view downriver. Pike and whitefish are caught in the lake and good drinking water is readily available. The continual flooding was a problem, however, and is mentioned frequently by informants as an important reason for moving the village. The new site is located on the slope of a fairly steep bluff in an area characterized by stunted spruce growth and spongy, wet sphagnum. In spite of the well-drained slope, there are few dry areas where houses can be built. The new location appears to have been chosen because the ground was high and the Bureau of Indian Affairs could construct a school where flooding would never occur. Since the Bureau refused to build the badly needed school in Old Shageluk, the villagers were more or less forced to move in order to obtain the new facility. Prior to the shift downriver, some consideration was given to the possibility of moving out to the Yukon as Holikachuk residents had done. The Old Bonasila site (HC-47) was tentatively selected, but it is not clear what prompted the eventual decision to remain on the Innoko.

At the time of Zagoskin's visit in February, 1844, Old Shageluk, or Tlëgozhitno, had a population of 45 living in three houses (Zagoskin, 1967, p. 307). His map, however, locates the settlement on the wrong side of the river (Zagoskin, 1967, opp. p. 358). The village was apparently visited by a Russian Orthodox priest in 1845, the year that a mission was established at Ikogmiut. From 1847 through 1879 the parish records of the Kvikhpak mission simply list "two Shageluk villages" giving population totals, but not naming or differentiating between them. It is possible that Old Shageluk and HC-7 (Zagoskin's Iltenleyden) are the settlements to which the records refer. Throughout these years the population of the two villages averaged approximately 145 persons living in 20 to 30 houses.

Beginning in 1880 Old Shageluk is differentiated from the other village by a variety of names and the populations given are as follows (number of houses in parentheses):

1880	148	(32)	1887	166	(35)
1881	148	(32)	1888	172	(35)
1882	148	(32)	1889	215	(38)
1883	154	(35)	1890	214	(38)
1884	166	(35)	1891	no figures	
1885	no figures		1892	234	(38)
1886	162	(35)			

During this period the so-called "second village" may have been deserted or nearly so since no populations are given (AROCA/parish records: Kvikhpak mission, church register).

The records of the Kvikhpak mission contain no further population data for Old Shageluk, although priests continued to make occasional visits. During the winter of 1905 John Chapman journeyed to the community and stayed with the trader, Mr. John Cristo. He counted "10 or 11 houses" (Chapman, 1906, pp. 686-689). Five years later census reports given to the Roman Catholic mission at Holy Cross by the official census taker listed 53 Indian and seven white inhabitants (HCM diary, July 27, 1908-Dec. 31, 1912, OPA/HCM, box 3). Beginning in 1920 official census figures for the community are as follows:

1920	130	1950	100
1930	88	1960	155
1940	92		

(U.S. federal census reports, 1931, vol. 1; 1963, vol. 1, pp. 3/10-11). The 1970 census data for villages listed in the Alaska Native Claims Settlement Act gave a population of 167 for Old Shageluk, the figures which were apparently obtained just prior to the move to the new site (Bureau of Indian Affairs, 1971). The considerable variation in all these figures doubtless reflects the time of year at which the census data were collected. As previously noted, a school was constructed at Old Shageluk about 1906; a post office was established in 1924 (Orth, 1967, p. 858).

HC-9. One of the best documented settlements on the Innoko River is Holikachuk, which, like Old Shageluk, probably was occupied during prehistoric times. On nineteenth-century and modern maps it sometimes appears as "Hologachaket." DeLaguna (1947, p. 74; pl. xi, 5) obtained a planing adze blade from the local trader at the time of her visit in the summer of 1935. The settlement was vir-

tually abandoned in 1963 when most inhabitants moved to the mouth of Grayling Creek on the Yukon.

The village of Holikachuk occupied a large, flat lip of land just below the place where a branch of Shageluk Slough, known as Holikachuk Slough, joins the Innoko River. The site is about 4 or 5 ft. above the level of the river and some sections have flooded frequently in past years. The river is also cutting rapidly in this area and it is apparent that much of the older sections of the site have been washed away. Among the previously occupied buildings still standing are a church and a store; many more were destroyed by a fire in the late 1960's after the settlement was completely abandoned.

About half a mile behind the settlement is a large lake where there is good fishing for pike through the ice in winter. One house at Holikachuk is still maintained in good condition for former residents who wish to come to the lake to fish. Holikachuk, like Old Shageluk, is thus situated between the river and a lake which provides fresh water and a significant winter food supply. In 1935 deLaguna (1947, p. 75) was told of a village site "on the far side of the lake" that was 75 years old. She did not visit this site nor could anything be learned about it during a visit to the area in 1972.

Zagoskin (1967, pp. 235, 307) stopped briefly at Holikachuk, which he called "Khuligichagat," on his way up the Innoko and noted five winter houses occupied by "not over 70 inhabitants of both sexes." A Russian Orthodox priest visited Holikachuk for the first time in 1852 and there are virtually continuous population records from 1853 to 1867 and from 1878 to 1892 as follows (numbers in parentheses refer to dwellings):

1853	5 (8)	1878	71 (12)
1854	58 (10)	1879	70 (12)
1855	58 (10)	1880	70 (12)
1856	57 (10)	1881	70 (12)
1857	57 (10)	1882	70 (12)
1858	57 (10)	1883	70 (12)
1859	57 (10)	1884	115 (15)
1860	57 (10)	1885	115 (15)
1861	59 (10)	1886	no figures
1862	no figures	1887	no figures
1863	no figures	1888	118 (14)
1864	61 (10)	1889	172 (25)
1865	61 (10)	1890	no figures
1866	62 (12)	1891	no figures
1867	71 (12)	1892	192 (40)

(AROCA/parish records: Kvikhpak mission, church register).

The federal census of 1910 listed only 29 inhabitants, suggesting that the enumerator visited the settlement in summer when most residents were in fish camps on the Yukon (HCM diary, July 27, 1908-Dec. 31, 1912, OPA/HCM, box 3). In 1939 the settlement had a population of 77 and in 1950 the figure was 98; in 1960, the last year for which official figures are available, 122 persons were enumerated. (U.S. federal census reports: 1952, vol. 1, pp. 51/6-8; 1963, vol. 1, pp. 3/10-11).

In February, 1963 representatives of the Bureau of Indian Affairs and the Alaska State Housing Authority met with most of the men to discuss the move to Grayling on the Yukon. At this meeting a program of mutual-help housing sponsored by the Public Housing Administration was discussed and the village voted in favor of such a program that would enable the families to obtain loans for building materials. According to informants, the decision to move was made because Holikachuk was believed to be too isolated. Lower freight rates and other advantages were expected to result from relocating on the Yukon and thus be served directly by supply barges from Nenana rather than indirectly from Holy Cross as New Shageluk is at the present time (see note, p. 30).

HC-10. In 1935 deLaguna was informed by the trader at Holikachuk of an old site on the west bank of the Innoko between Holikachuk and what she called Thompson (Holikachuk) Slough. She obtained an adze blade and ulu blade from him which he found at this site (deLaguna, 1947, p. 74; plates xi, 15; xiii, 7). DeLaguna did not examine this location, which would appear to be a continuation of Holikachuk village, but was told that the house pits were not more than 50 years old.

In 1972 this site appeared as a flat, cleared area approximately 75 yd. long and 25 yd. deep. Four or five house pits could be located along with the remains of a large, deep *kashim* out of which grew sizeable willows. Middle-aged informants could not recall any occupation in this area during their lifetime.

HC-11. DeLaguna also described another site just above Holikachuk but on the other side of the river where she conducted excavations in 1935. She identified eight house pits and a *kashim* and excavated a single house (deLaguna, 1947, pp. 75-76; pls. xiv, 48; xvi, 29; xxii, 2-3; figs. 19, 20, 32, nos. 3, 5). A few trade goods were recovered leading her to believe that the settlement was of no great antiquity.

In 1972 this site, a cleared area approximately 75 yd. long and 30

yd. deep, served as the Holikachuk cemetery. Five poorly defined house pits could be seen among the graves and it was apparent that willows had encroached upon the formerly occupied area since deLaguna's excavations. Elderly informants at New Shageluk were unwilling to hazard a guess concerning the age of this site, but agreed that they could not recall a time when it had been occupied.

HC-12. Informants at New Shageluk mentioned that there used to be a village or a fish camp opposite the mouth of Shageluk Slough. Nets are occasionally set there at the present time, but there are no indications of former habitation. Zagoskin (1967, p. 235) referred to a small settlement which he called "Tozhgelëde" and which was located 7 miles below Holikachuk on the left bank of the Innoko. This is approximately the correct location for the site described by informants, but it would appear to have been cut away by the river since his visit. Unfortunately, he gave no further information nor did he include population figures as he did for other settlements on the Innoko.

HC-13. Several informants mentioned a site located at the junction of Shageluk and Holikachuk sloughs and although it could not be located during surveys in the summer of 1972, its existence was verified by historical sources. Slough channels alter rapidly and it is likely that this site, now heavily overgrown with willows, is no longer located along an open waterway. According to informants, the settlement was at a particularly good location for taking whitefish in the fall.

Jetté referred to this site as "Nikadodellenten" or "Niltchadodelenten" meaning "where it flows apart" (Jetté, *Ethnological dictionary of the Tena language; On the geographical names of the Tena*, OPA). DeLaguna (1947, p. 74) was told of the existence of this site in 1935 and informants agreed that it was known to white men as "two sloughs" or "the forks." An elderly informant at Grayling, born at Holikachuk about 1893, described a visit to this site as a boy when he noted houses with collapsed roofs. This would suggest that the settlement was abandoned at that time, but it is shown on a map printed in 1910 (Sleem, 1910). Among those villages listed in official census figures obtained by the mission at Holy Cross in 1910 was one called "Nilteelihten," a name which resembles Jetté's designation for HC-13; it had a population of 54 (HCM diary, July 27, 1908-Dec. 31, 1912, OPA/HCM, box 3). The inhabitants are said to have moved to Holikachuk.

Population of the Lower Innoko

The confusing terminology characteristic of historic source materials concerning the Innoko River and Shageluk Slough to which previous reference has been made greatly complicates the matter of determining the accuracy of population estimates for this area. Zagoskin (1967, p. 307) listed six settlements below the entrance of Holikachuk Slough, including the village of Holikachuk. The combined population of five of these was 285 in 1843. The tenth federal census in 1880 enumerated 150 persons living on "Chageluk Slough and Innok River" (Petroff, 1884, p. 12). The enumerator did not visit the area and the figure seems unrealistically low even allowing for the ravages of epidemics during the years following Zagoskin's explorations. This appears particularly likely in view of the figures obtained by later nineteenth and early twentieth century visitors. John Chapman (1898, p. 167) listed a population of 273 on "Chageluk Slough," presumably referring to the Innoko below Holikachuk, in 1898 and five years later he noted eight settlements with a total population of 318 (J. W. Chapman to J. W. Witten, Aug. 29, 1903, ECA/J. W. and H. H. Chapman papers). On the other hand, in 1910 a geologist working in the area (Maddren, 1910, pp. 19-20) believed that there were no more than 100 natives in the entire Innoko Valley. He counted three occupied settlements on the lower river and the ruins of four or five others. The same year, however, Chapman referred to 216 individuals living in four communities (Chapman, 1911a, p. 10).

Some of the discrepancies in the above figures are doubtless related to the time of year during which they were obtained. As previously noted, salmon do not run in the Innoko to any extent and many inhabitants of the area move to the Yukon during the summer months to inhabit temporary fish camps. Thus some communities were virtually completely abandoned at this time. It is probable that some population figures were obtained in the summer when visitors to the area were numerous and travel relatively easy. Zagoskin's data was collected during the winter months and since he was a careful and accurate observer, it is likely that his population estimates are reasonably accurate. Similarly, John Chapman, another good observer with a strong interest in Indian culture, visited the Innoko country at various seasons of the year over a period of more than 40 years. It is probable, therefore, that the population of the lower Innoko varied between 250 and 300 during the period between 1845 and the influenza epidemic of 1918-1919. Since that time, the

population of the area has varied between 200 and 250 until the early 1960's when, as previously noted, the inhabitants of Holikachuk established a new settlement at Grayling on the Yukon River.

The Upper Innoko River

The inhabitants of the upper Innoko spoke a different language, which has been designated by the name of their largest contemporary village, Holikachuk (Krauss, 1974); those closest to Ingalik territory were culturally aligned with that group. There were, at various times during the nineteenth and early twentieth centuries, a number of small Holikachuk communities on the Innoko and its tributaries above the village after which the group is named. Zagoskin (1967, p. 168) met a party of Indians from the upper Innoko in the summer of 1843 when he was traveling on the Yukon above Nulato. They informed him that they frequently came to the Yukon to trade their furs either at the Russian-American Company post at Nulato or with Malemiut Eskimo who came to the mouth of the Innoko River.

Except for the short stretch of river between Holikachuk village and the mouth of the Iditarod, an important tributary, the upper Innoko was not included in surveys made during the summer of 1972. Therefore, most of the information that follows is taken from historical sources, although some data were obtained from informants at New Shagluk and Yukon River villages.

Oph-1. The best documented settlement on the upper Innoko was Dementi, located opposite the mouth of the Iditarod River. Although this area was examined in 1972, widespread flooding prevented a definite location of the site. There appeared to be no high ground in the immediate vicinity of the Iditarod's mouth.

In the fall of 1839 Petr Fedorovich Kolmakov, pioneer explorer of the upper Innoko, reached this settlement during his descent of the river. While there, he learned that the Russian-American Company post at Ikogmiut had been attacked, destroyed, and the inhabitants massacred in the spring of that year, probably by Eskimos from the Kuskokwim in retaliation for the smallpox epidemic of 1838-1839 for which the Russians were held responsible. Kolmakov decided to turn back and the inhabitants of Dementi showed him a short route to the Kuskokwim (Chernenko 1967, p. 10; Zagoskin, 1967, pp. 81, 236-237, 275, 300; RACR/CS, vol. 20, no. 486, folios 403-404, October 14, 1841).

In 1844 Zagoskin (1967, pp. 236-237, 307) visited the settlement,

which he called "Ttality," and noted that it consisted of three winter houses with a population of 45. The village may also be referred to indirectly in the earliest Russian Orthodox Church records for the area which indicate that three upper Innoko villages were visited annually by a priest beginning in 1854. The only settlement identified by name, however, is Holikachuk. From 1880 to 1884 a settlement identified as "second village" is listed as being located 30 miles above Holikachuk, approximately the correct location for Dementi. Throughout these five years "second village" had a population of 79 living in 12 houses (AROCA/parish records: Kvikhpak mission, church register).

During the early years of the Innoko gold rush, which began in 1907, a boat landing and store were apparently maintained at Dementi to serve miners on the Iditarod and further up the Innoko (Orth, 1967, p. 266), but the operation must have been a small one and of short duration. The settlement is shown as "Deminti" on a map (Sleem, 1910) published at that time and John Chapman visited the village in the summer of 1911 when there were only two families in residence (Chapman, 1911b, pp. 1,025-1,026). Hudson Stuck, Episcopal missionary at Fort Yukon, also paid the community a visit in 1917 and referred to it as "tiny" (Stuck, 1917, p. 373). It would appear that Dementi was abandoned shortly thereafter as elderly residents of New Shageluk have no clear memories concerning the place.

Unfortunately, it has been impossible to learn anything definite concerning derivation of the settlement's name. New Shageluk informants believe the village to have been named after an early native resident, while Orth (1967, p. 266) suggested that the designation was possibly derived from the name of Nikolai Dementov, the last Russian post manager at Kolmakovskiy Redoubt on the Kuskokwim (Oswalt, 1963, p. 15). Father Jetté (On the geographical names of the Tena, OPA) referred to the village as "Radiloten" and believed that Iditarod was a corruption of this name.

The Iditarod River was known to Zagoskin (1967, p. 238) as the Yalchikatna. He made no attempt to ascend it, nor were any Indian settlements on its banks reported to him. This agrees with information obtained from informants who noted that the banks of the river are low on both sides and there are few suitable locations for human habitation. In 1908 gold was discovered along tributaries of the Iditarod and by the summer of 1909 several hundred prospectors were on the river. The town of Iditarod was established in June,

1910, located at the head of navigation during the greater part of the open season. During low water the larger steamboats ascended only as far as Dikeman, another mining camp established about 80 miles below Iditarod. Both communities were ghost towns by 1920, but during the years of mining activity there were temporary camps of Indians who were seasonally resident on the river while cutting wood for the steamboats (Sleem, 1910, pp. 376-377; Maddren, 1911, pp. 240-241).

Zagoskin (1967, pp. 237-238) mentioned the existence of three small villages on the upper Innoko between "Tlëgon," a settlement above the mouth of the Sulatna mentioned by Petr Kolmakov, and Ttality, but none of these are shown on his map. One, "Kkholikakat," is very likely near the village shown on later maps as Dishkakat and the other two may have been fish camps. Informants at New Shageluk and Grayling were firmly of the opinion that there were no permanent settlements between Dementi and Dishkakat but that at various times in the past a number of fishing or trapping camps may have been located along this stretch of the Innoko.

According to Jetté (On the geographical names of the Tena, OPA), there was an abandoned village at the confluence of the Dishna and Innoko Rivers known as "Tihkakat" and he noted that this name was often applied by whites to another village approximately 20 miles downriver the native name of which was "Korotsenedalten." Thus the Tihkakat of Jetté may be the Kkholikakat of Zagoskin, a site that was apparently abandoned long before Korotsenedalten (Dishkakat) became the only significant native village on the upper Innoko and of considerable importance to whites during the gold rush. In 1907, those prospectors who came up the Innoko by boat or across from Kaltag by winter trail made Dishkakat their stopping place since dried salmon for dog food could be obtained in winter and Indians were often available for service as guides (Maddren, 1910, pp. 24-26; Orth, 1967, p. 274). The "Innoko" post office was maintained at Dishkakat from 1907 to 1915 (Ricks, 1965, p. 29).

One of the most elaborate attempts to start a new settlement on the Innoko during the gold rush was at the mouth of the Dishna River, presumably at or near the site of Jetté's Tihkakat. The location was selected on the supposition that it had geographical advantages with reference to future development of the region. It was at or near the usual upstream limit of steamboat navigation in summer, and was assumed to be a good location for a large commercial company to establish a central distributing station for the valley. A

number of substantial log and lumber buildings were constructed in the summer of 1907 and the settlement was named Innoko City. The expected boom did not materialize, however, and by September, 1908 the few remaining inhabitants had moved to Dishkakak (Madren, 1910, pp. 24-26). Dishkakak itself would appear to have been abandoned before 1920.

Although several thousand miners entered the upper Innoko country between 1906 and 1920, the total Indian population appears to have been small throughout the nineteenth and early twentieth centuries. In 1880 E. W. Nelson (VanStone, 1978, p. 45) noted that disease had reduced the population to no more than 125 and in 1898 Chapman (1898, p. 167) estimated a similar number. In 1911, however, he enumerated only 52 individuals (Chapman, 1911a, p. 10) and it is probable that with the decline of gold mining activity the remaining inhabitants of the area between Holikachuk and Dishkakak moved to the lower river or the Yukon not long after that date.

Note

Zagoskin (1967, p. 235) noted that "Khuligichagat" was on the left bank of the Innoko and he may have stopped at HC-11. It is possible that the settlement known as Holikachuk, or a variant spelling, was not established until after the explorer's visit and that the old name was retained for the new settlement. Another possibility is that a single name was applied to the three sites (HC-9-11) at or near the confluence of the Innoko River and Holikachuk Slough.

II

VILLAGE SITES ON THE ANVIK RIVER AND IN THE VICINITY OF ANVIK VILLAGE

Introduction

After the Innoko, the major Yukon tributary in the area of this study is the Anvik River which heads near latitude 64° north, not far from Norton Sound, and flows southeast 140 miles, paralleling the Yukon for much of that distance. Approximately 50 miles from its mouth, the Anvik turns abruptly eastward and enters the Yukon $1\frac{1}{2}$ miles north of Anvik village. The upper river is largely confined to a single channel flowing in a broad valley between steep, spruce-covered hills. The lower river meanders considerably and is consequently characterized by abundant sloughs and split channels. The ends of many of these sloughs have been sealed off and they exist only as ox-bow lakes. After the river turns eastward, the banks are generally low and bordered by an abundant growth of willows and alders interspersed with a few clumps of spruce and birch in the higher places. Just above the village of Anvik, the right bank of the Yukon rises 50 or 60 ft. above the river, while immediately below the village is Hawk Bluff, approximately the same height. The left bank of the river is low in this area.

According to Jetté (On the geographical names of the Tena, OPA), the Ingalik name for the Anvik River is "Kedzono," meaning "Leg-ging River," possibly a reference to the excellent caribou hunting that formerly characterized the upper river region, providing caribou leg skins which were made into boots. In a variant copy of his study of geographical names, Jetté noted that Anvik was an Eskimo expression meaning "exit" or "going out place," a translation confirmed by recent research (Correll, 1972, p. 152).

Site descriptions

In this section the village of Anvik and those sites in the immediate vicinity will be discussed first, followed by an account of settlements formerly located along the Anvik River.

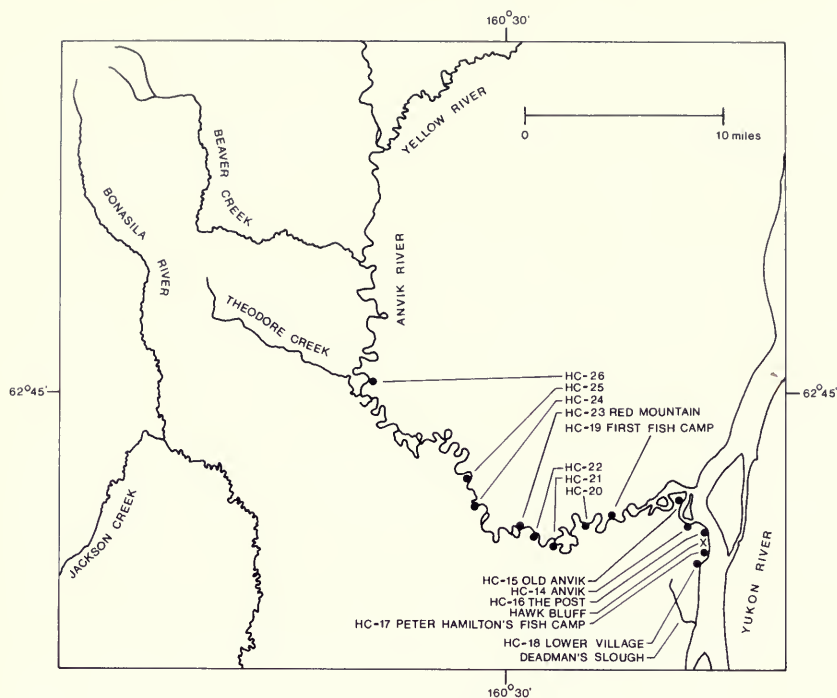


FIG. 3. Map of the Anvik River and vicinity.

HC-14. Two totally different native names have been recorded by previous investigators for the village of Anvik, the oldest continually occupied Ingalik settlement on the Yukon River. Jetté (On the geographical names of the Tena, OPA), referred to it as "Kedzokakat," meaning "mouth of the Kedzono," his name for the Anvik River as noted above. Parsons (1921-1922, p. 51), on the other hand, recorded the name as "Gudrinethchax," meaning "middle people." This designation apparently refers to that part of the settlement located in the vicinity of the mission buildings (deLaguna, 1947, p. 67). As far as I have been able to determine, the name Anvik, or an approximation of the present spelling, is the only name for the community to appear in other published or archival source materials.

Although direct evidence is lacking, it seems certain that the mouth of the Anvik River has been the site of human habitation since prehistoric times. As Osgood (1958, p. 28) has noted, it is an excellent location for building houses and for fishing. The settlement is also strategically located for meeting travellers along the Yukon River and those who were on the way to Old Shageluk and the upper Innoko region.

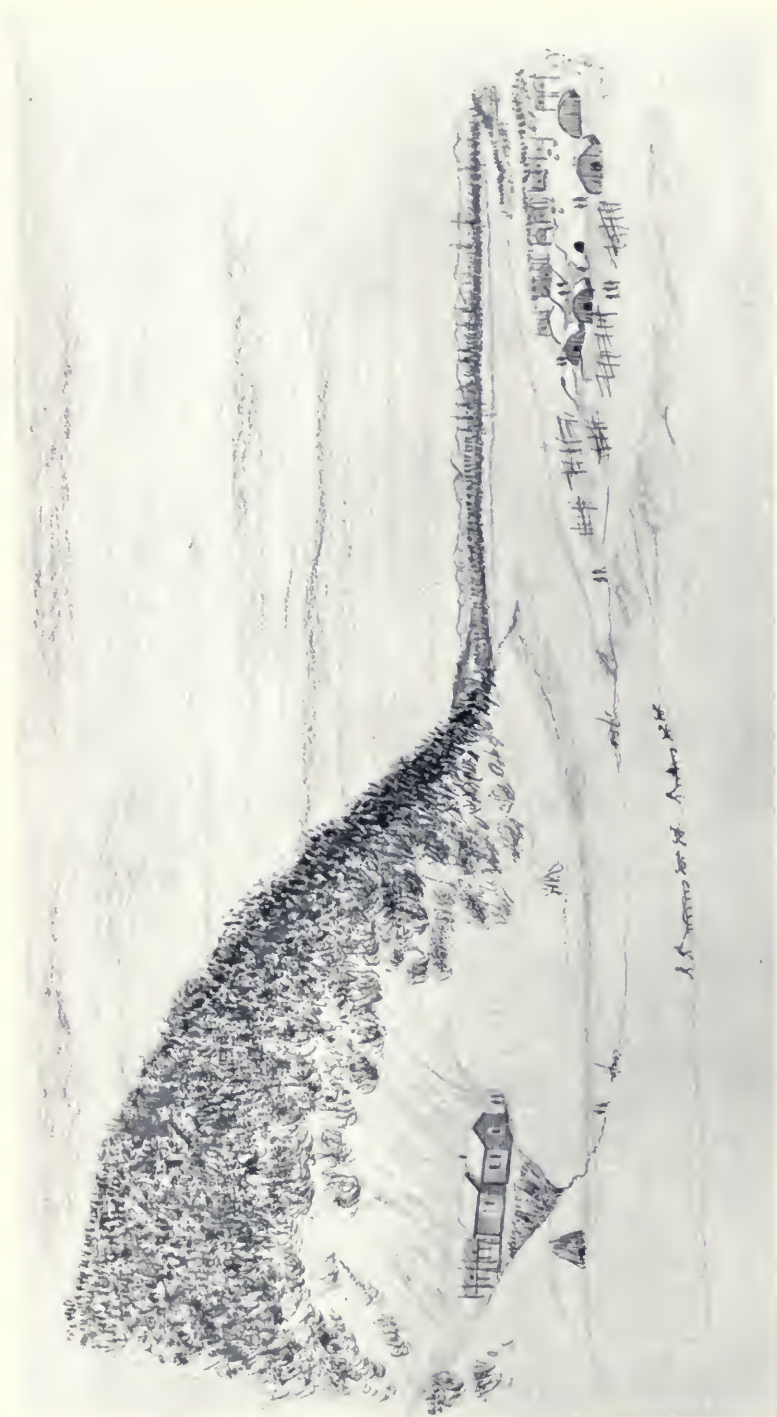


PLATE 2. The mission (left) and Anvik Point settlement (HC-14). Drawing by Guy Kakarook about 1895 (Smithsonian Institution, National Anthropological Archives).



PLATE 3. Anvik Point (HC-14) about 1920 (University of Alaska Archives).



PLATE 4. The church at Anvik on January 1, 1919. In the background are the houses of Indians who moved onto mission land (University of Alaska Archives).

The present Anvik village is located on the right bank just inside the old mouth of the Anvik River. In 1934 the Anvik cut through the narrow tongue of land separating it from the Yukon, thus turning the lower 2 miles of the former into a slough. A small creek enters the Anvik on the right bank just above its old mouth and it was at this point that the Episcopal mission constructed its buildings in 1889, having moved from 2½ miles further up the river where John Chapman and his colleague, Octavius Parker, had begun teaching school in 1887. The mission purchased approximately 172 acres from the villagers, whose main settlement at that time was directly across the river on a point of land extending out into the Yukon. Gradually, the inhabitants moved across the river onto church land and not long after 1915 the old village site was used only as a summer fish camp.

At the time of her visit in the summer of 1935, deLaguna confused the fish camp on the point with the "modern Indian settlement" (deLaguna, 1947, p. 67), probably because there were, at that time, a number of substantial structures still standing on the point and the camp was fully inhabited during the summer fishing season. She correctly noted, however, that the Anvik Point site is the only area of habitation at the mouth of the Anvik River and its general vicinity that can lay claim to any age. In her description she noted two terraces, both running at right angles to the Yukon, one gently sloping and swampy and the other rising to a height of 10 or 12 ft. at the Yukon bank where the bank was cutting rapidly. In 1935 there were occupied houses and abandoned house pits along this terrace. The pits of the older houses extended along the second terrace for a distance of 600 ft. or more from the Yukon. DeLaguna was told that those nearest the modern cabins were about 50 years old while those further back were older. She noted some midden deposits and counted approximately 35 houses and two *kashims*. A number of artifacts were recovered by her party and are illustrated, along with a plan of the settlement, in her report (deLaguna, 1947, pp. 67-68, pls. iv, 36; x, 2; xi, 4, 10-12, 16; xvi, 3, 13, 18-19; xxiv, 3, 6, 12, 15, 18-19; fig. 16; fig. 28, no. 4).

In the 30 years that have passed since deLaguna's visit, the Anvik Point site has changed in appearance to some extent. More willows have grown up and it is impossible to see as many house pits as are indicated on her plan. The lower terrace which faces modern Anvik is extremely low and swampy as deLaguna indicated, and it floods when the ice jams above Holy Cross at the time of spring breakup as

it has done numerous times in the past. Elderly residents of Anvik believe that as much as 300 ft. may have been cut from the Yukon side of the site in the past 50 years. This would appear to include virtually all the area where the "modern cabins" were located in 1935 (deLaguna, 1947, fig. 10), as well as many of the house pits in two rows on the upper terrace that runs away from the Yukon bank and follows the contour of the mouth of the Anvik.

Today there is a thick covering of grass over the formerly occupied area and many drift logs have been carried in by spring flooding. In the area where the site is cutting there appears to be 3 or 4 ft. of midden. Burials are cutting out at several points. Although deLaguna (1947, p. 68) believed that the artifacts she recovered indicated a prehistoric component at the Anvik Point site, materials from the midden observed and recovered in the summer of 1974 included glass beads and a variety of metal artifacts at the lowest level of occupation.

When Chapman and Parker first came to Anvik in 1887 they lived in cabins located about 2½ miles above the Anvik Point site at the upper end of the peninsula that separated the Yukon and Anvik rivers before the new confluence was created in 1934. This area was also the location of traders' cabins in the late nineteenth century and was known as Anvik Old Station. It is probable that one or more Indian families may have lived in the immediate vicinity of the post buildings. The site of these structures was destroyed when the Anvik and Yukon joined, thus creating an island of the former peninsula on which the Anvik Point site still stands.

Early photographs of the Episcopal mission buildings and the surrounding area indicate that by 1918 the new village had spread along the right bank of the Anvik River for more than a mile above the creek that separated mission structures from the houses of the villagers (Chapman, 1918, pp. 245-247; see pl. 4). A sketch plan of Anvik published in 1924 (Chapman, 1924, p. 107) also shows a similar arrangement and seems to indicate that by this date all residents had moved onto church land.

Considerable population information is available for the Anvik area. Andrey Glazunov, who explored the lower Yukon for the Russian-American Company in 1834, noted 10 large dwellings at the time of his visit to Anvik and counted 240 persons who came to the *kashim* to hear him talk about the fur trade (VanStone, 1959, p. 43). Nine years later Zagoskin enumerated 120 individuals living in five

houses (Zagoskin, 1967, p. 307), a figure which doubtless reflects the severity of the smallpox epidemic. Russian Orthodox priests began visiting Anvik two years after the mission was established at Ikogmiut in 1845, but population figures do not appear in the church records until 1853. Between that year and 1863 fewer than 50 inhabitants were enumerated each year, although the number of occupied dwellings (10) is constant. Obviously, many residents were away from the settlement when the priest obtained his figures. From 1864 to 1867 less than 60 inhabitants were enumerated each year and the number of occupied dwellings increased to 12. Population figures for the decade between 1868 and 1877 are missing, but the enumerations between 1878 and 1892 are as follows:

1878	94	(14)	1885	139	(14)
1879	94	(14)	1886	136	(14)
1880	93	(14)	1887	139	(15)
1881	95	(14)	1888	151	(23)
1882	94	(14)	1889	158	(23)
1883	93	(14)	1890	157	(23)
1884	139	(14)	1892	170	(23)

(AROCA/parish records: Kvikhpak mission, church register).

The figures prior to 1883 would appear to be very much on the conservative side as indicated by Dall's reference to Anvik in 1868 as "a large village of some 10 to 12 houses, each of which may contain 20 inhabitants" (Dall, 1870, p. 217). However, the enumerator for the 10th federal census (1880) noted only 95 inhabitants and his figures included Anvik Old Station (Petroff, 1884, p. 12). In 1890 the official population was 191 (Porter, 1893, p. 3), a figure that compares favorably with the church statistics, and 10 years later John Chapman enumerated 157 (J. W. Chapman to J. W. Witten, Aug. 29, 1903, ECA/J. W. and H. H. Chapman papers). Official census figures from 1910 to 1970 are as follows:

1910	151	1950	99
1920	140	1960	120
1930	79	1970	83
1939	110		

(U.S. federal census reports, 1931, vol. 1; 1963, vol. 1, pp. 3/10-11; 1973, vol. 1, table 6).

It is difficult to interpret these figures given the many unknown factors involved in the various enumerations, but it would appear that by the late 1880's the population of Anvik had recovered from the effects of the smallpox epidemic and in spite of other periods of severe illnesses, maintained its size consistently into the modern

period. The latest census figures indicate the effects of movement of some families to the urban centers of Alaska, a trend that could eventually result in consolidation of the Ingalik population into fewer villages. For a variety of reasons, among which is the scarcity of drinking water since the change in the mouth of the Anvik River, Anvik is now the least desirable settlement location in the Ingalik area.

HC-15. This site is located on what is now Anvik Slough about three-quarters of a mile above the present village on the right bank. Here a stream, originating in a small lake behind Anvik, enters the slough. At the mouth of this stream is a large cleared area approximately 500 yd. long and 100 yd. deep. High grass covers the entire site and willows are encroaching on the cleared area in a number of places. There appear to be two parallel terraces, one along the bank of the slough approximately 25 ft. above the present water level and the other behind and slightly lower. In between is a grassy area about 3 ft. lower than the terraces.

At the lower end of the site, which extends well up the creek, there are no house pits, but the foundations of several cabins are apparent. At the upriver end are three house pits and a large *kashim*. All are at the extreme front of the site and have been partially cut away, although the cutting process stopped when the mouth of the Anvik River shifted. Informants stated that at one time there had been a large number of house pits and it is true that the front terrace disappears before it reaches the upper end of the cleared area. It is obvious that the oldest part of the site, most of which has disappeared, was at the upper end and that the lower end inside the creek mouth was occupied later. The entire area has been used as a fish camp in recent years and there is a large smoke house standing at the present time, as well as a functioning sawmill located inside the mouth of the creek.

Informants and deLaguna (1947, p. 67) referred to this site as Old Anvik and, according to the latter, the native name means "at the foot of the rocks." She did not consider it to be prehistoric, and an informant, aged 65 in 1974, recalled that people were living there when she was a little girl. A comment by John Chapman seems to suggest that the settlement was occupied at least as late as 1906 (Notes on the eclipse of the moon of February 8, 1906, ECA/ J. W. and H. H. Chapman papers). Since neither Glazunov nor Zagoskin referred to the site, it may not have existed in the 1830's and 1840's or have been occupied only as a summer fish camp.

HC-16. This site, located in a draw on Hawk Bluff, is sometimes referred to as "The Post," although informants noted that in Ingalik its name means "big eddy," a reference to the movement of the river in this area. Fish wheels are frequently set there at the present time. In this location William Chase, an early white resident of Anvik, maintained a trading post for many years, beginning not long after the turn of the century. It may have been the site of a fish camp at an earlier date. Informants recall that one other family lived there at the time the post was in operation. In addition to the store, Chase also maintained a roadhouse that was frequented by miners on their way to the Iditarod country. The Chase family moved from this location to Anvik more than 50 years ago and William Chase died in the early 1940's. The site is now overgrown with grass and willows and there are no obvious evidences of former habitation.

HC-17. This is the site of Peter Hamilton's Fish Camp which, according to informants, has not been used for at least 40 years. It occupies the mouth of a narrow gulch in the hills extending inland from the lower end of Hawk Bluff and is heavily overgrown with willows. There is an extensive sand bar in front of the gulch which extends upriver approximately 400 yd. where it has been cleared to form a picnic area for the present-day residents of Anvik. It is possible that the entire area was utilized as a camp at an earlier time. A small spring in the vicinity of the fish camp provides an excellent supply of fresh water. Still standing on the site is a large smoke-house with walls made of strips of bark, as well as a collapsed cache.

Both Zagoskin (1967, p. 191) and Nelson (VanStone, 1978, p. 31) mentioned a village located below the mouth of the Anvik River and Nelson referred to it as a summer village where people go to fish. They may have been referring to this site or to HC-18.

HC-18. This site, known as Lower Village, occupies a rather steep draw between two hills about three-quarters of a mile downriver from HC-17. About 300 yd. of sand bar, thickly covered with small willows, has formed in front of the site, probably most of it in recent years. There is a cleared area covered with high grass, but little indication of previous occupation. The river is wide and straight here and the site may have been located on a slough at the time it was occupied. Lower Village is an excellent example of how rapidly a recently abandoned settlement can become overgrown and separated from the main channel of the river.

Lower Village was established by Indians who fled from Anvik following an outbreak of influenza in 1927 (deLaguna, 1947, p. 67; Rowe, 1927, p. 465), although portions of the site may have been occupied earlier. In fact, the site of Lower Village could be the fish camp referred to by Zagoskin and Nelson as noted above. The settlement was still occupied in 1935 (H. H. Chapman to J. W. Wood, Nov. 18, 1935, ECA/Alaska papers, box 14) and there may have been at least a few families living there as late as 1950. At the height of its occupation, there are said to have been eight or nine houses and a native-owned store. It was also the residence of Nikolai Doctor, an important Anvik shaman who died in the 1930's. Some residents may have returned to Anvik shortly after his death.

HC-19. Moving up the Anvik River, this is the first old settlement encountered. It may have been the summer fishing village which Osgood (1958, p. 28) called "Place where something is left," although it is on the opposite side of the river. Today, however, people refer to it as "First Fish Camp." When occupied, the camp was along a slough, but in recent years the main channel has cut over in its direction and as a result, much of the habitation area has been cut away. Willows and tall cottonwoods cover the site and no remains of houses or other structures could be located.

According to informants, First Fish Camp was an excellent location for fishing because the water is shallow and a fence or weir could be built to span the river with traps set at intervals. In fact, this was an important attribute of most fish camp locations along the Anvik River. If traps were not used, fish could be speared as their progress up the river was impeded by a fence or weir.

The site appears to have been occupied at least as early as the late 1860's since it is noted on Raymond's map (1871, map). Two other settlements are also noted by Raymond. An elderly white man living in Anvik in 1974 noted that this settlement was the only fish camp on the Anvik at the time of his first trip up the river in 1924.

HC-20. Located between a small lake and a bend in the river, the Ingalik name for this site is said to mean "tamarack tree." Like HC-19 it was also a summer fish camp and its location suggests that it may be the camp referred to by Osgood (1958, p. 28) as "Village at the end." An informant in his fifties was certain that the site had not been occupied in his lifetime. The river is deep here and has doubtless cut away much of the previously occupied area. It would not, at the present time, appear to be a suitable location for the construction of a fence or weir.

HC-21-22. According to informants, these were winter trapping camps that may also have been used occasionally in summer. Neither location showed signs of previous human occupation and they would never have been recognized as such had they not been pointed out by informants. The Ingalik name for HC-22 was said to mean "willow grass in slough" and may be the site that Osgood (1958, p. 28) referred to as "Spruce branches shaking in the current." Both HC-21 and 22 are on the right bank of the river, as is Osgood's village, but he located it much further upriver and gave the general impression of considerable size.

HC-23. Called "Red Mountain" by informants, this is the "red stone village" visited by deLaguna in 1935, and referred to by Osgood as "Red-stone." By far the largest settlement on the Anvik River, this site was occupied in both winter and summer. DeLaguna (1947, p. 71) described the site in some detail noting 20 house pits and a *kashim* and she illustrated two artifacts recovered from a grave (*ibid.*, pl. xiv, 24, 29). Her account also includes a sketch map of the site (*ibid.*, p. 69).

Red Mountain is on a loop slough that was formerly the main channel of the river. At the time of deLaguna's visit, much of the formerly occupied area was open and grass covered. Now it is almost entirely covered with willows making the house pits very difficult to locate. Informants noted that fishing was once very good in an eddy in front of the village. DeLaguna's informants told her that the settlement was abandoned in 1898 when the inhabitants moved to Anvik.

HC-24. This was a winter and summer camp situated at the mouth of a small slough. The Ingalik name is said to translate as "big under the tree." It is in the approximately correct location for Osgood's (1958, p. 28) "Spruce branches shaking in the current." Informants noted that this area was the approximate upper limit of fishing on the Anvik. Beyond this point salmon were considered unfit for human consumption and there are said to be no fish camps further up the river. One man, aged 57 in 1972, noted that his grandfather had lived at HC-24 and that the place was noted for the many large burls on the trees that could be used for making bowls for local use and for trade. Today people travel to pick berries on a hill just above the site on the opposite side of the river. There is a winter trail near here that crosses over to Jackson Creek, a tributary of the upper Bonasila River.

HC-25. Not far above the previously described site and on the same side of the river is the location of a small winter camp at the end of a winter trail to Anvik. According to informants, the site was called "crystal rocks" because of the shape of stones found along the river bank. Today people pick berries on the opposite side of the river along a bluff that extends upriver from the vicinity of HC-24.

HC-26. This is the site of a small winter camp on the left bank just above the mouth of Theodore Creek. An informant, aged 57 in 1972, said it was occupied long before he was born and called by an Ingalik name meaning "camp robber takes somebody's fish." One family stayed here all winter to hunt and trap along Theodore Creek.

This small site is one of many winter camps on the Anvik River which have their counterparts in the trapping cabins of more recent times. There were many such camps in this area; some had names, but many were known simply as "so-and-so's camp." Some have been washed away, while the locations of others have long since been forgotten. For example, there are two trapping cabins, one on either side of the river, just above the mouth of Beaver Creek. The one on the right bank is older and the cabin has disappeared, nothing remaining but a small cleared area covered with high grass and fireweed. The camp on the left bank is in use at the present time. In 1972 there were also functioning trapping camps on both sides of the Anvik near the mouth of the Yellow River.

Informants maintained that there were no camps above this point but several claimed knowledge of a sizeable winter village formerly located just below the mouth of the Yellow River on the opposite side of the Anvik. Although described as being clearly visible at the present time, the site could not be located during surveys in the summer of 1972. Osgood (1958, p. 28) referred to a village called "Under the rocks" on the left bank between the mouth of Swift River and Otter Creek, but that location would appear to be too far upriver to be a reference to this site. Otter Creek was on the route used by the Ingalik in their trading trips to St. Michael and Unalakleet and by the Eskimos of Norton Sound traveling to the lower Yukon for similar purposes. Glazunov (VanStone, 1959, p. 40) encountered a camp at the junction of Otter Creek and the Anvik in 1834. An Indian had been forced to winter there because of the illness of his wife. Anvik informants noted that it took five days to paddle and pole their wooden river boats to the mouth of Beaver Creek. The trip could probably be made more quickly in traditional

birchbark-covered canoes. The upper Anvik was an excellent area for caribou hunting in the late nineteenth century, although even as early as the 1870's the herds may have been decimated due to ecological changes and the introduction of firearms (Raymond, 1871).

It is virtually impossible to make a reasonable estimate of population on the Anvik River in the nineteenth and early twentieth centuries. Most of the settlements along its banks were either summer fishing villages, winter trapping camps, or occasionally both. Only Red Mountain appears to have had a year-round population and if deLaguna's estimate of the number of houses is correct and they were all occupied simultaneously, the population could have been in the vicinity of 300. It is significant, however, that Glazunov encountered only one Indian and his family during his journey down the Anvik in the winter of 1834. The population of the Anvik River thus appears to have been primarily seasonal. Anvik Point village was the base from which the Ingalik exploited the summer and winter resources of this major Yukon tributary.

III

SETTLEMENTS ON THE YUKON RIVER: ANVIK TO THE CONFLUENCE WITH SHAGELUK SLOUGH

Introduction

A characteristic feature of the Yukon River between Anvik and the upper end of Fox Point Island is the consistently steep right bank. This represents the eastern extremity of a range of low and rolling hills rising in places to heights in excess of 2,000 ft. which separate the Yukon Valley from the coastal region of Norton Sound. Where spurs of these hills run out to the river bank, their bluffs, which occasionally rise 50 to 60 ft. above the river, serve as convenient landmarks for the river traveler. The left bank of the Yukon in this area is consistently low, a part of the flat river flood plain that is a characteristic feature of the Innoko Lowlands (Wahrhaftig, 1965, p. 30).

A consequence of this physiographic characteristic is that settlements in this area are located almost exclusively along the steep and stable right bank, usually at places where creeks enter the Yukon. Such locations are often small, narrow valleys or gullies which widen and flatten out at the river bank. Two sites reported by informants were located on the low left bank and there probably were more in the past. The river is cutting rapidly on this side and settlements of any antiquity would have long since been washed away.

Site Descriptions

The sites described in this section begin with those closest to Anvik and continue northward to the upper end of Fox Point Island, the northern limit of the area included in this study.

HC-27. The first site above Anvik is known locally as "Four Mile," although its name in Ingalik is said to mean "end of the bluff," a name very similar to that recorded for Old Anvik (HC-15). Primarily a summer fish camp, informants agreed that HC-27 also served oc-

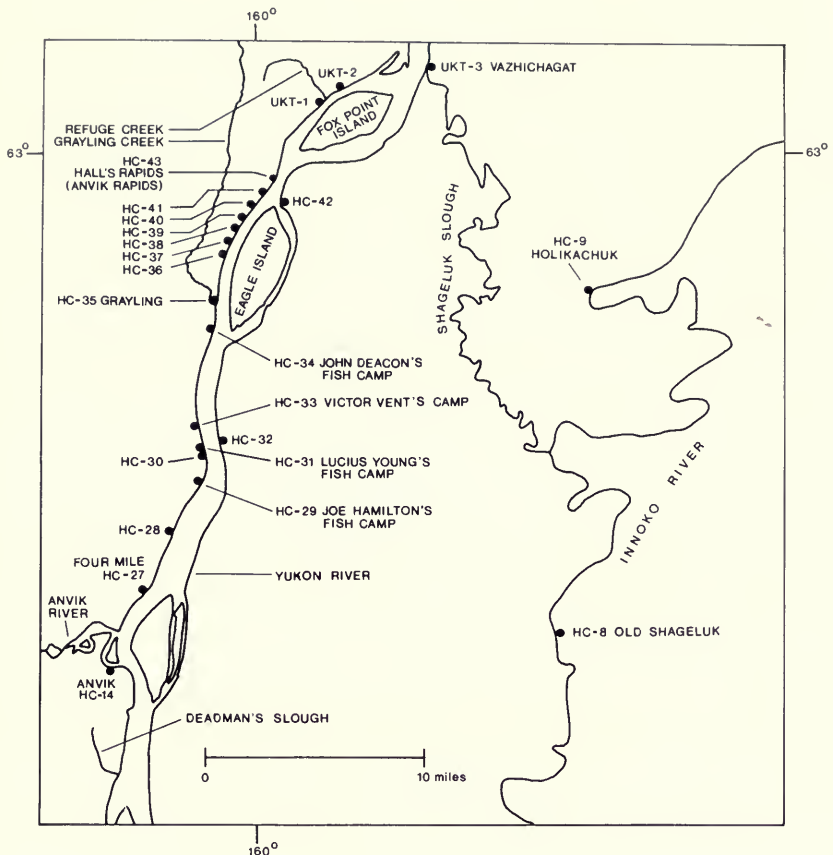


FIG. 4. Map of the Yukon River between Anvik and the confluence with Shageluk Slough.

casionally as a winter village. The site appears today as a narrow flat area in front of a steep bluff; a small creek runs through the formerly occupied area. Six standing structures including a cabin, a large smokehouse, and various outbuildings were observed at the time of a brief visit in the summer of 1974.

HC-27 may be one of the older camps along this stretch of the Yukon. It appears on an undated, but probably early twentieth century, chart (Pilot chart of the Yukon, nd.) and elderly informants at Anvik confirm an occupation in the late nineteenth century. They further note that the site has been used regularly during the summer until recent years when the virtual replacement of dog transpor-



PLATE 5. Four Mile fish camp (HC-27) in 1919 (Smithsonian Institution, National Anthropological Archives).

tation by mechanized snow vehicles reduced the necessity for catching and drying large numbers of salmon during the summer runs. As late as 1929 families were regularly wintering at this site (H. H. Chapman to Mrs. J. W. Chapman, Jan. 2, 1929, ECA/J. W. and H. H. Chapman papers) and it may have been one of the places to which people moved at the time of epidemics and other sustained periods of illness.

Sites located between HC-27 and the mouth of Grayling Creek served primarily as fish camps, although it is probable that some were used occasionally during the winter. With few exceptions to be noted, historical maps and charts do not show occupation along this section of the river bank.

HC-28. The area in the vicinity of this site is known locally as Charlie Wulf's Point after a white settler who lived there in the 1940's. The site is located 9 miles above Anvik and appears as a broad, willow-covered flat area at the foot of a high bluff. Informants noted that it was both a summer and winter camp, and that it had not been occupied since the early 1950's.

HC-29. Known locally as Joe Hamilton's Fish Camp, this site was used by a former Old Shageluk resident from the 1920's until sometime in the mid-1960's. However, informants believe that the location was occupied considerably earlier. The size of the cleared area suggests that several families may have fished there in the past.

HC-30. This is another fish camp about which it was possible to learn very little from informants. An old cabin and cache remain standing at the mouth of a small stream which runs between two hills. One informant offered the information that two families lived there in the 1930's, but he believed the site to be much older.

HC-31. Lucius Young's Fish Camp. This site, which was occupied in the summer of 1974, has been used for the past 30 years by Mr. Young and his family. However, it is apparently much older as Mr. Young's wife mentioned that at one time an old house pit was visible in the area and artifacts are occasionally dug up by dogs. The site, like others in this area, is located on a slight slope at the foot of a steep bluff and a small stream enters the river about 90 yd. downstream from Mr. Young's house. The camp at present consists of a well-built log house, a large smokehouse, and a storage shed. There are covered fish drying racks along the riverbank in front of the residence. Most of the sites in this area probably looked much like Mr.

Young's camp at the time they were occupied with traditional Ingalik summer houses being characteristic of the older ones.

HC-32. This site, one of the few mentioned as being located along the lower left bank of the Yukon, has long since been washed away. Several informants referred to it as a fish camp occupied by the great-grandfather of a young resident of Anvik; this would make it at least 100 years old. Elderly informants recalled that it had been occupied during their childhood. Osgood (1958, p. 29) noted two settlements on this bank of the river, one of which, "Up-trail," is identified as a winter camp. HC-32 appears to have been located further upriver than either one of them. It is significant that neither deLaguna nor Hrdlička mentioned sites along the left bank in this area. Left bank camps were likely to have been winter hunting and trapping camps providing access to the broad lowland east of the Yukon. Adequate drinking water would have been difficult to obtain at these camps in summer.

HC-33. Little could be learned about this site, although a cache and fish rack are still standing. Informants referred to it as Victor Vent's Camp, occupied sporadically for fishing at least since the summer of 1929 when Hrdlička stopped there. At that time the inhabitants included an elderly white man and his Indian wife (Hrdlička, 1944, pp. 207-208). A chart of the Yukon dated 1899 (Edwards, 1899) shows cabins in this general area, but they could be a reference to either HC-32 or HC-34.

HC-34. The right bank of the lengthy stretch of river between HC-33 and HC-34 is extremely precipitous and the beach is not wide enough to provide locations for settlements or camps of any kind. These bluffs begin to recede inland in the vicinity of HC-34 which is within a mile of the mouth of Grayling Creek. This is a fish camp occupied in 1974 by John Deacon of Grayling and his family. Mr. Deacon was born in 1893, but the camp was used by his family before his birth. A small creek enters the river in the vicinity of his cabin and smokehouse.

HC-35. The present-day village of Grayling is located on a flat tongue of land at the mouth of Grayling Creek. Behind the settlement tree-covered hills rise abruptly, but around the village there are only a few scattered birch and spruce. This sparseness of tree cover is the result of extensive cutting in the late nineteenth and early twentieth centuries when a major wood camp to supply fuel for steamboats was located at the mouth of Grayling Creek. Most of

the people living at Grayling today were formerly inhabitants of Holikachuk (HC-9) on the Innoko River.

Although Grayling's present population is a recent phenomenon, the mouth of Grayling Creek has been occupied at various times in the past. Jetté gave the name "Maadzikat" to a settlement that was present in the early twentieth century and noted that it meant "amulet river mouth" (On the geographical names of the Tena, OPA). The place is said to have been known as "Dois-Brats" and "Shaman's Village" in Russian times. On a terrace half a mile south of the creek mouth deLaguna identified the site which she refers to as Old Grayling, noting that it consisted of a number of modern house pits and the ruins of a *kashim*. Hrdlička (1944, pp. 48-49, fig. 32) examined this site in 1926 and 1928 and removed a small number of burials. DeLaguna also noted an older site above the mouth of Grayling Creek which she surveyed and from which she obtained a number of artifacts (deLaguna, 1947, pp. 64-66, pls. viii, 1; fig. 15; pls. xiii-xvi, xxiii-xxiv). Both of these sites have been almost obliterated by the construction of modern residences, an air strip, and other buildings and roads on both sides of Grayling Creek.

Although there is little doubt that there was human occupation at the mouth of Grayling Creek at the time of first European contact, the earliest identifiable historic reference to the settlement occurs in 1869 when Raymond (1871, map) noted "native houses" at the mouth of the creek. There is a reference to the settlement in 1888 (Giordano memoirs, OPA/Giordano, box 2) when one family was in residence, and the name Grayling is on a track chart of the Yukon used at the end of the nineteenth century (Edwards, 1899). On this chart there are notations of wood camps both above and below the name as well as the name "Pickett's Wood," an indication of the importance of this location to the steamboat captains whose vessels plied the river in considerable numbers following the discovery of gold in the Klondike.

In the summer of 1900, according to Cantwell (1902, p. 267), there were 32 people in residence at Grayling and the settlement was described as a rendezvous where the Indians came in summer to fish and cut wood and in winter to trade, a way station for native travel with a largely transitory population. However, sizeable winter gatherings were also mentioned by Cantwell and he described the *kashim*, probably the one from the new settlement that deLaguna noted, in some detail. In the same year John Chapman enumerated

41 individuals at Grayling (J. W. Chapman to J. W. Witten, Aug. 29, 1903, ECA/J. W. and H. H. Chapman papers).

It has not been possible to ascertain with certainty when the Grayling site referred to in the previous two paragraphs was abandoned, if, in fact, it ever was. Holikachuk residents probably used it intermittently as a fish camp, although it had no permanent residents after 1930. The site appeared to have been recently abandoned at the time of Hrdlička's visit in June, 1926 when he remarked that it "seems just to call for a new settler" (Hrdlička, 1944, p. 48). The settlement does not appear in official census records until 1970 when there were 139 inhabitants representing all or most of those who had moved from the Innoko a few years earlier (U.S. federal census report, 1973, table 6).

In the summer of 1972 five fish camps, three of them in use, were observed between Grayling and HC-43, all of them located along the high right bank of the river and all at the mouths of creeks where there are flat open areas and the hills are set back slightly from the river bank. In 1974 six camps (HC-36-41) were noted in this area, all of them abandoned. These were associated by informants with living individuals, but each appeared to have been occupied earlier, even though specific evidence in the form of house pits or midden was lacking. It is probable that there have been seasonally occupied camps along this section of the Yukon for many years, doubtless back into prehistoric times, many of them associated with families from the Innoko who came over to the Yukon each summer to fish for salmon.

HC-42. Informants reported the existence of a site "more than one hundred years old" above Eagle Island, locally called Grayling Island, at the mouth of the slough which separates the island from the mainland. Attempts to locate it were unsuccessful because of extremely low water in the slough. The left bank of the river is building in this area and the site may now be at some distance from the water and covered with a thick growth of willows.

HC-43. The best documented site above Grayling is located at Hall's Rapids, locally known as Anvik Rapids, a narrowing of the Yukon where the water is somewhat swifter than it is elsewhere in the area covered by this study. According to informants, this was the location of a large fish camp occupied seasonally by people from Holikachuk until the inhabitants of that settlement moved to the Yukon in 1963. The camp was situated along two terraces and on

both sides of a sizeable creek. There are a number of standing fish racks, cabins, and smokehouses, all in considerable disrepair but none of any great age. Sections of this site are heavily overgrown with tall grass and willows, and a careful examination of the cleared areas along both terraces revealed no house pits or other signs of earlier occupations.

Jetté (Ethnological dictionary of the Tena language, OPA) gave the name "tanedilenten" ("where it flows upon the rocks") to the Anvik Rapids site, while Dall (1870, p. 21) rendered it "klan-ti-linten" meaning "rocks and strong water." The settlement is shown on Raymond's (1871) map. Schwatka (1892, p. 326) camped at Hall's Rapids in August, 1883 but he made no reference to native inhabitants. The camp also appears on a late nineteenth-century track chart of the Yukon River (Edwards, 1899).

Informants insisted that the Anvik Rapids site was never anything but a summer fish camp. When Hrdlička stopped there in July, 1929 only a white man and his Indian wife were in residence and the location was described as "a large former camp of the Shageluk people" (Hrdlička, 1944, p. 206). Hrdlička was informed that the camp had been abandoned because a woman died there. He noted a burial ground upriver from the occupied area. The site was also apparently abandoned at the time of deLaguna's visit in the summer of 1935. She saw four pits which could have been houses and was informed that a standing cabin was on the site of an old *kashim* (deLaguna, 1947, p. 65). The Anvik Rapids site has certainly been used as a summer fish camp since deLaguna's visit and if she did, in fact, see house pits, winter occupation at some time in the past would appear to be indicated.

Ukt-1. Another summer fish camp of Holikachuk people was located at the mouth of a small creek, unnamed on modern maps but locally called Refuge Creek, along the right bank of the Yukon opposite Fox Point Island. It is situated along a high bank on the down-river side of the creek and is heavily overgrown with willows and other trees. A single poorly defined house pit was located and there may be others in the overgrown areas.

It is apparent that this site has been abandoned for some time and may be of some antiquity. Lieutenant Henry T. Allen passed the camp on his way down the river in 1885 and placed it on his map (Allen, 1887, map 1). The site was abandoned in July, 1929 when Hrdlička stopped there (Hrdlička, 1944, p. 217). According to informants, an inhabitant of Grayling who was 81 in 1974 and was born

at HC-13 spent summers at this camp when he was a small child. He is believed to be the only person now living who has lived there.

Ukt-2. Another small fish camp not far above Ukt-1 is said to have been occupied for many years by a Holikachuk resident born in 1890. A cabin and fish drying racks are still standing.

Ukt-3. In the summer of 1843, Zagoskin, on his journey from Nulato to Ikogmiut, stopped at a settlement he called "Vazhichagat" located at the confluence of Shageluk Slough with the Yukon. He described the village as having a population of 80 living in five houses and noted that it was an important stopping place for Indians from the lower Innoko River traveling to Norton Sound to trade. The crossing from Vazhichagat to the village of Klikitarik east of Mikhailovskiy Redoubt took three days by way of the upper Anvik River and its tributaries (Zagoskin, 1967, pp. 191, 307). The settlement also appears to have been visited by Frederick Whymper and his party of the Western Union Telegraph Company Expedition on their trip down the river in July, 1867. Whymper called it "Yakutzkelignik" and noted that it was temporarily uninhabited (Whymper, 1869, pp. 264-265).

This settlement could not be located by deLaguna (1947, p. 65) in 1935 nor was I able to find it in 1972 and 1974. Informants had no definite memories concerning its location and some insisted there had never been a settlement at the entrance to Shageluk Slough. The Yukon is cutting rapidly in this area and any settlement at this point would doubtless have long since been cut away.

With the possible exception of Vazhichagat, the only consistently occupied year-round settlement on the Yukon above Anvik and within the area of this study was at the mouth of Grayling Creek. All others were summer fishing camps, although a few may have been occupied occasionally in the winter. The largest fish camp in this area was at Anvik Rapids, although Holikachuk people had other camps in the vicinity and as far up the river as the mouth of Simon Creek (see fig. 2) not far above the entrance to Shageluk Slough. The fish camps closest to Anvik were used by Anvik people, while the area above Grayling was inhabited in summer almost exclusively by people from Holikachuk. Fishermen from the village of Old Shageluk were more likely to have had their fish camps along the stretch of river between Anvik and Holy Cross. The present-day inhabitants of Grayling thus settled in an area already familiar to most of them.

IV

SETTLEMENTS ON THE YUKON RIVER: DEADMAN'S SLOUGH TO THE MOUTH OF THE INNOKO RIVER

Introduction

Below the village of Anvik the banks of the Yukon River are low on both sides except in two places where small ranges of hills with peaks that rise to approximately 1,000 feet reach the river. In this general area along the east bank of the Yukon are many meandering sloughs and streams and one important river, the Bonasila. This tributary heads near latitude 62° north and flows in a generally southeast direction 125 miles to Bonasila Slough, which in turn empties into the Yukon. Like the banks of the lower Anvik, those of the lower Bonasila are bordered primarily by willows and alders. There is also a heavy growth of willows along both sides of the Yukon in this area. The river banks are probably changing more rapidly along this section of the Yukon than in any other part of the region with which this study is concerned.

Site Descriptions

HC-44-45. The former, a small fish camp on Deadman's Slough, is said to have been occupied off and on during the summer for the past 30 years. The latter, on Bonasila Slough near a small lake, was reportedly the winter camp of an Anvik resident whose family has used it for the past 15 years. Although Zagoskin reported passing two small settlements between Anvik and the mouth of the Bonasila River in the summer of 1843 (Zagoskin, 1967, p. 192), it is doubtful if anything more extensive than fishing or trapping camps like these were ever located in this area of frequent shifts in the river channel.

HC-46. Opposite the upper end of Turtle Island, on the right bank, is a small fish camp reported by informants to have been used in recent years during the early summer for the taking of king salmon. It

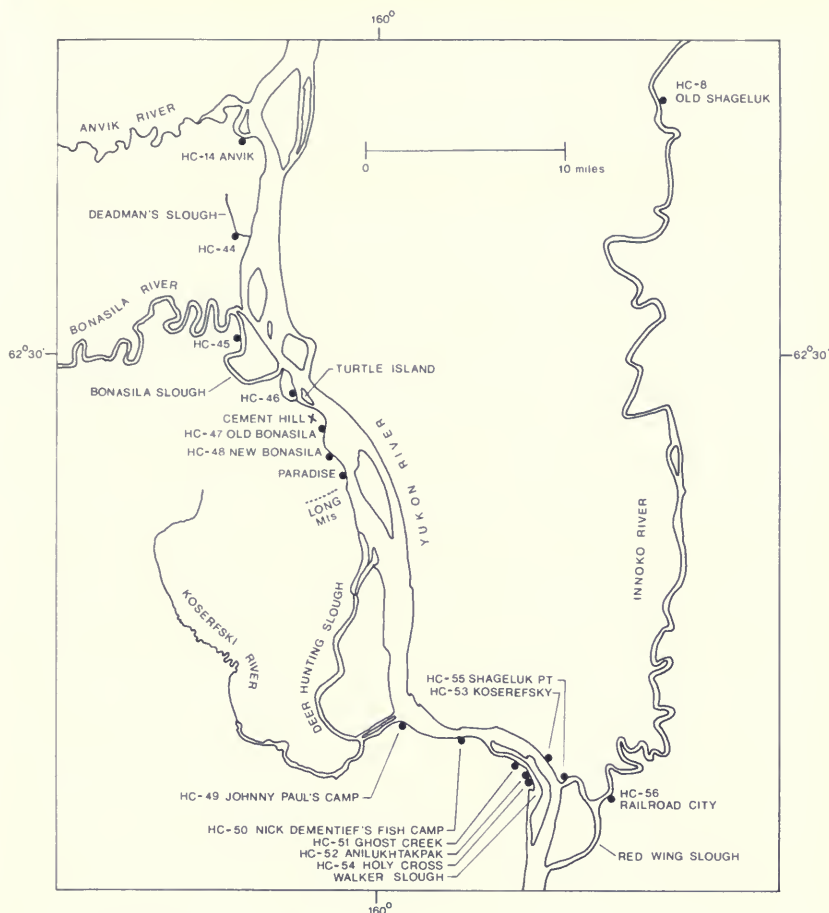


FIG. 5. Map of the Yukon River between Anvik and Holy Cross.

is located on a flat spit heavily overgrown with willows and is about 15 ft. back from the present bank of the slough. A fish rack is still standing, but there is nothing to indicate antiquity at this site. A late nineteenth-century track chart of the Yukon shows a fish camp in this approximate location (Edwards, 1899).

HC-47. This is the important settlement of Old Bonasila, largest between Anvik and the Holy Cross area and located on the upriver side of a creek locally known as Cold Creek just below Cement Hill. Jetté (On the geographical names of the Tena, OPA) gave the name "Netsene'anten" ("launching canoes") to this site and was of the opinion that Bonasila was a native name "somewhat mutilated."

Others have suggested that the word is a mutilated Russian designation. Glazunov (VanStone, 1959, p. 44) called the settlement "Magimiut" and other explorers and travelers in both the Russian and early American periods were likely to use variations of this designation.

According to deLaguna who examined and mapped the site in August, 1935 (deLaguna, 1947, pp. 70-72, fig. 18), there are two terraces between Cold Creek and Cement Hill. The old settlement is located on the second which was, at that time, about 10 ft. above the water level and sloped up to a wooded hillside. Today the formerly occupied area is much further from the river bank than it was at the time of deLaguna's visit and more completely covered with willows and tall grass. In fact, it cannot be seen from a boat traveling in either direction on the river.

The earliest reference to Old Bonasila in the historical literature is Glazunov's and Zagoskin (1967, pp. 197, 307) stopped there in the summer of 1843; the settlement apparently flourished well into the American period. DeLaguna (1947, p. 72) believed that Old Bonasila was probably the village visited by Dall in 1867 and described by him as a "large winter village between two hills, known to the Russians as the Murderer's Village" (Dall, 1870, p. 220). On August 23, 1883 Lieutenant Frederick Schwatka passed "Makagamute" and noted that it consisted of "eight to ten houses of a most substantial build, flanked and backed by fifteen to twenty caches, and had altogether a most prosperous appearance" (Schwatka, 1892, p. 331).

Hrdlička visited the Old Bonasila site in 1926 and again in 1929. The first summer he was not particularly impressed by the site itself, but his interest was aroused by the "remarkably primitive" looking stone tools and pottery he found along the adjacent beach and which he described as a "paleolithic industry" (Hrdlička, 1930, pp. 60, 142-147; 1944, pp. 51-53). During his second visit three years later, he opened two trenches but quickly encountered frost and recovered few artifacts. Since he professed to see evidence that the "stone and pottery culture" encountered on the beach belonged to the same people who had occupied house pits on the site, he postulated that "Bonasila, therefore, was an old settlement that persisted to Russian times, but probably not for long" (Hrdlička, 1944, pp. 208-210).

DeLaguna's excavations at Old Bonasila are described and illustrated in some detail in her report (deLaguna, 1947, pp. 72-74 with associated plates and figures). She believed the site to have

been occupied both in historic and prehistoric times, but was unable to separate the two horizons stratigraphically. She, too, found crude stone tools, but believed that most of these were naturally broken flakes which, because of their sharp edges, could have been used without further working.

In 1834 at the time of Glazunov's visit Old Bonasila consisted of five dwellings, 40 caches, and a large *kashim*; the population was 120 (VanStone, 1959, p. 44). Nine years later, Zagoskin enumerated 44 people inhabiting three structures, a decline in population that presumably reflects the severity of the smallpox epidemic of 1838-1839 (Zagoskin, 1967, p. 307). Although Old Bonasila appears to have been visited by the Russian Orthodox priest stationed at Ikogmiut as early as 1845, the year the mission was established, meaningful population records were not kept until five years later and more or less regularly thereafter until 1892 as follows (figures in parentheses indicate dwellings):

1850	5	1867	49 (8)
1851	5 (5)	1878	84 (20)
1853	30 (6)	1879	84 (20)
1854	30 (6)	1880	84 (20)
1855	30 (6)	1881	84 (20)
1856	30 (6)	1882	85 (20)
1857	30 (6)	1883	83 (20)
1858	30 (6)	1884	88 (20)
1859	30 (6)	1885	86 (20)
1860	29 (6)	1886	87 (20)
1861	42 (8)	1887	88 (20)
1863	44 (8)	1888	94 (20)
1864	45 (8)	1889	96 (23)
1865	45 (9)	1890	96 (23)
1866	45 (8)	1892	96 (23)

(AROCA/parish records: Kvikhpak mission, church register)

The reliability of these figures is subject to the constraints mentioned previously for those for other sites, but they appear to indicate that by 1892 Old Bonasila was close to achieving once again the population it supported at the time of Glazunov's visit. In fact, the official government enumeration in 1880 was 121 (Petroff, 1884, p. 12) which, together with the statement by Schwatka quoted above, suggests that the settlement may have regained its early contact size much earlier than the church records would indicate.

According to deLaguna (1947, p. 71), Old Bonasila was abandoned in 1898 following an epidemic of measles and the survivors established New Bonasila. In 1900 John Chapman enumerated 22

individuals for "Bonasila," but it is not clear whether he is referring to the old or the new village (J.W. Chapman to J.W. Witten, Aug. 29, 1903, ECA/J.W. and H.H. Chapman papers).

HC-48. New Bonasila. This settlement, established by the former residents of Old Bonasila, is located approximately one-quarter of a mile below Long Mountain and approximately 2 miles downriver from the parent village. According to deLaguna (1947, p. 74), the Ingalik name means "at the point of the hill." An unnamed creek enters the Yukon here and several small lakes are located a short distance inland from the river bank.

There appear to have been three occupied terraces at New Bonasila and deLaguna (1947, p. 74) counted 12 house pits and the pit of a *kashim* on the highest of these. Also on this terrace at the time of her visit, approximately 8 to 10 ft. above the river, were modern cabins and a graveyard. Indians reported finding stone adzes on the beach and deLaguna believed the site to have had a prehistoric component (deLaguna, 1947, p. 74). The formerly occupied area extends on both sides of the creek, but most of it is on the downriver side. There is a good view up the river but downriver the view is obstructed by Cement Hill. The site appears to have been used as a fish camp in recent years as two standing tent frames and some collapsed caches were noted. Nothing remains of the cabins noted by deLaguna.

Although deLaguna implied that the New Bonasila site was occupied immediately following the abandonment of Old Bonasila, there are no references to the new village in the Holy Cross Mission diaries until June, 1920 (July 1, 1919-Dec. 31, 1923, OPA/HCM, box 3). Neither is the settlement enumerated in any official government census records. It is probable that the 8 or 10 house pits counted by deLaguna belonged to an earlier occupation, one possibly concurrent with the occupation of Old Bonasila.

It is not clear from deLaguna's account whether there was anyone living at New Bonasila at the time of her visit, but if not, the abandonment was presumably temporary since the Episcopal Bishop of Alaska visited the community in June, 1935 (The Newsletter, Missionary District of Alaska, no. 21, July-Aug., 1935, ECA/Alaska papers, box 91) and again in January, 1945 (The Episcopal Church in Alaska. Notes from a report by the Bishop, January, 1945, ECA/Alaska papers, box 91). Informants at Anvik in 1974 noted that the last residents left about 20 or 25 years ago. They were said to have been under the influence of an important shaman and aban-

doned the settlement when he died; some moved to Anvik and others to Holy Cross.

Anvik informants mentioned a "camp" across the Yukon from the New Bonasila site, but they were unable to remember anything about it except its location at the mouth of a slough. Jetté (On the geographical names of the Tena, OPA) gave a place name, "Tseyozaron," ("canoe") opposite "Bonasila." Informants spoke of a number of small summer fish camps just above Holy Cross on the left bank of the Yukon and noted that at one time there was a slough in this area that led directly to the Innoko and was considerably shorter than the main channel. It eventually silted up, however, and the fish camps have long since been cut away by the river.

HC-49. Below Paradise the river bank flattens considerably as one approaches the lower reaches of the Koserefski River and Deer Hunting Slough. The location on the U.S.G.S. reconnaissance series map (Holy Cross quadrangle) designated Paradise is at the front of a fairly steep bluff on the downriver side of Long Mountain. A flat bar covered with willows extends out from the bluff but no indications of occupation could be seen from a boat and no landing was made during surveys in the summer of 1974. According to informants, Indians never lived at Paradise, but a white man who planned to farm the area is said to have lived there for at least a year in the 1920's or perhaps earlier. No other information could be obtained locally with reference to Paradise.

On a hill at the mouth of the Koserefski River is a site that looks to be old, but is known locally as Johnny Paul's Camp after a Holy Cross resident who in 1974 was in his sixties. The formerly occupied area is right up against the bluff and well above the present river level. Informants were unable to give any additional information concerning this site and it was not possible to contact Mr. Paul in Holy Cross. The location is approximately correct for "Aleksi's Bar-bora," a settlement where two families lived at the time Father Robaut and Brother Giordano stopped there on their way from Anvik to Koserefsky in the winter of 1887 (Giordano memoirs, OPA/Giordano, box 2).

HC-50. Several standing structures, including two cabins, mark the site known as Nick Dementief's Fish Camp near the mouth of a creek at the foot of a bluff. This may be the site reported to deLaguna (1947, p. 77) as being located near "Victor's Point" just above the upper end of Walker Slough. Two Holy Cross families had gill nets in the vicinity of HC-50 in the summer of 1974.

HC-51. Just above the present village of Holy Cross is Ghost Creek (Gost Creek on the Holy Cross quadrangle, U.S.G.S. reconnaissance series map), so named, according to Hrdlička, because of the many burials in the vicinity of the creek. He visited the site in July, 1926 at which time James Walker, even then a long-time Holy Cross resident, had a house and trading post there. Hrdlička found artifacts weathering out of the bank and although "Russian" influence was evident in the graves, he believed, in his usual optimistic fashion, that there was probably a prehistoric component at the site (Hrdlička, 1930, p. 63; 1944, p. 55). DeLaguna (1947, p. 77) also believed that Ghost Creek was occupied in both historic and prehistoric times. Her informants give the name "old town" to the prehistoric site, while a more recent settlement had an Ingalik name meaning "the end of the big eddy."

It was impossible to confirm either of these names during a visit in the summer of 1974, and at that time there was little to indicate either graves or previous occupation at Ghost Creek. The creek mouth is wide and opens onto Walker Slough, formed by an extensive sandbar which extends as far downriver as Holy Cross, but it was either absent or much smaller at the time of Hrdlička's visit. The creek valley is deep and wide and not heavily covered by vegetation. Informants said that it was on the slopes on the upriver side of the valley that Hrdlička excavated graves. Today much of the area on both sides of the creek near its mouth has been disturbed by the building of roads and structures by the Walker family. James Walker's original house still stands and there are a number of more recently constructed dwellings and outbuildings. Local tradition tells of a battleground in the vicinity, possibly on an island that once was visible just opposite the mouth of Ghost Creek, where a battle of major proportions took place between Indians and Eskimos in the early or mid-nineteenth century (see deLaguna, 1947, p. 77).

Whatever may have been the extent of historic occupation in the area, it is clear that nobody was living at Ghost Creek when Father Robaut and Brother Giordano came to Koserefsky in the winter of 1887. Upon their arrival, they lived first in the village *kashim* but then moved across the river into a cabin belonging to an Indian from Anvik. It seems clear that this cabin was located on or near Ghost Creek, but there are no references to other inhabitants along the creek at that time (Giordano memoirs, OPA/Giordano, box 2). Although a village at Ghost Creek is shown on a Yukon navigation

chart, circa 1912 (UA), the first specific reference to people living there occurs in December, 1918 in the Holy Cross Mission diary (Jan. 1, 1913-June 30, 1919, OPA/HCM, box 3), probably a reference to James Walker and his family who were "exiled" from Holy Cross village by the mission. The Walker family has lived there since that time.

HC-52. On February 8, 1834 Glazunov arrived at a village he called "Anulychtychpack," the first settlement on the left bank downriver below Old Bonasila. As he did at Anvik and Old Bonasila, Glazunov visited the *kashim* which he described as the largest he had ever seen, and counted 300 men. In describing the village he noted 16 dwellings and approximately 65 additional structures that he called dwellings located about 2 miles from Anulychtychpack "on the banks of the river" (VanStone, 1959, pp. 44-45). He estimated the population of the area at 700 and noted that it was the last Athapaskan village on the Yukon. Glazunov's population estimate seems large and may include visitors from other settlements who were present to trade or participate in one of the Ingalik winter ceremonies. It should be kept in mind, however, that the explorer was apparently referring to at least two communities. A population of 700 in this general area at the beginning of the historic period is at least possible, if not entirely probable.

Eight years later in August, 1843, Zagoskin also stopped at "Anilukhtakpak," as he spelled it, and, like Glazunov, was impressed with the size of the *kashim*. He described it as "a remarkable building, 12 *sazhens* square and over 6 *sazhens* high, with three tiers of benches made of pine [spruce] planks that are 3¼ feet wide and have obviously been split and hewn with stone axes" (Zagoskin, 1967, p. 193). Zagoskin counted eight houses inhabited by 170 persons and made no reference to any other settlement in the immediate area (Zagoskin, 1967, p. 307).

Neither Glazunov nor Zagoskin were at all explicit about the exact location of Anilukhtakpak, although the latter did refer vaguely to its being situated on "an island or rather islands formed by the Ittege [Innoko], the Yukon, and its tributaries" (Zagoskin, 1967, p. 239). The area around the mouth of the Innoko is, and probably always has been, a confusing jumble of islands, sand bars, sloughs, and true river channels. Zagoskin further stated that "before the smallpox epidemic the native houses [at Anilukhtakpak] were in a little ravine near the river bank, but now they have been moved a short way downstream into another. The summer houses are built in

a straight line along the bank and appear from a distance to have the regularity of a European settlement" (Zagoskin, 1976, p. 193).

Zagoskin located Anilukhtakpak at latitude 62° 13' 33" N., longitude 159° 49' 38" W., close to the correct location for Holy Cross which is 62° 12' N. and 159° 46' W. DeLaguna (1947, p. 77) believed that Ghost Creek was the site of the settlement and this location would conform with Zagoskin's statement concerning a "little ravine." Holmberg (1873, map) rendered the name as "Aniluchtakpak" and also located it at Ghost Creek. Hrdlička, on the other hand, identified Anilukhtakpak with a site that formerly existed at or near the present Holy Cross village (Hrdlička, 1930, p. 129). Conceivably, both locations could be correct if, as Zagoskin noted, the settlement was moved a short distance downstream after the smallpox epidemic of 1838-1839.

The Russian Orthodox priest visited Anilukhtakpak in 1845 and the first population figures are listed in the parish records two years later. From that time on, village population figures are recorded more or less regularly as follows (number of houses in parentheses):

1847	101 (14)	1867	99 (15)
1850	100 (14)	1878	133 (35)
1851	99 (14)	1879	132 (35)
1853	122 (15)	1880	132 (35)
1854	124 (15)	1881	132 (35)
1855	121 (15)	1882	165 (35)
1856	120 (15)	1883	164 (35)
1857	120 (15)	1884	187 (35)
1858	120 (15)	1885	198 (35)
1859	120 (15)	1886	197 (35)
1860	118 (15)	1887	197 (35)
1861	117 (15)	1888	203 (35)
1863	120 (15)	1889	205 (35)
1864	97 (15)	1890	205 (35)
1865	95 (12)	1892	204 (35)
1866	96 (15)		

(AROCA/parish records: Kvikhpak mission, church register).

Anilukhtakpak does not appear under that name in any federal census and, as we have noted, the site at Ghost Creek was abandoned in 1887 when Father Robaut and Brother Giordano moved there from Koserefsky, as was the site at the present location of Holy Cross when the first mission buildings were constructed there during the following year. This being the case, the church population records in the later years must refer to another settlement in the immediate

vicinity, possibly the one called Koserefsky in many published and archival accounts.

HC-53. Although the village of Koserefsky would appear to have been one of the largest in the area covered by this study, information concerning its size, appearance, and even its exact location is extremely uncertain. Zagoskin made no mention of the settlement at all, although it must have been in existence at the time of his travels. Glazunov, it will be recalled, mentioned 65 dwelling houses, a number that may include caches, located "a verst and a half from there [Anilukhtapak] on the banks of the river" (VanStone, 1959, p. 44) which certainly suggests another community in the immediate vicinity. Unfortunately, Glazunov did not name this settlement nor did he note its direction from Anilukhtapak.

On June 9, 1868 while descending the Yukon from Nulato on his way to St. Michael, Dall entered the mouth of the Innoko River and after "ascending a little way, reached the Leather Village of the Russians" (Dall, 1870, p. 220) which he described as a large Ingalik summer camp. The inhabitants were said to have come from a place on the Yukon known to the Russians as Murderer's Village, identified here as Old Bonasila (HC-47). Jetté (1907, p. 178) believed that Koserefsky was a Russian name meaning Leather Village, presumably derived from "kozha" (skin, hide), but he located the settlement on the "south" bank of the Yukon. On Raymond's (1871) map, "Leather Village" is also shown inside the mouth of the Innoko near where Railroad City appears on more recent maps. There is always the possibility, of course, that Leather Village is not Koserefsky but rather a name applied to one of the lower Innoko settlements, possibly HC-55.

More reliable, but still incomplete, evidence seems to locate Koserefsky across the Yukon from and slightly above the eventual site of the Holy Cross mission. When Father Robaut and Brother Giordano were looking for a place to construct the first mission buildings, the Indians at Koserefsky told them about a place across the river and "three or four miles below" (Giordano memoirs, OPA/Giordano, box 3). The mission is indeed 3 or 4 miles below the cabin which the priest and brother occupied at Ghost Creek during the winter of 1887, a cabin which, as previously noted, was opposite Koserefsky.

Sister M. J. Calasanctius, a member of the first group of Sisters of St. Ann to come to the Holy Cross mission in the summer of 1888,

noted that Koserefsky was located across the Yukon from the mission and "three miles above" (Calasactius, 1935, p. 309). A late nineteenth-century track chart of the Yukon (Edwards, 1899) shows a number of houses and other structures on the river bank opposite Ghost Creek, but no name is given to this camp or settlement. Hrdlička visited the Koserefsky site in July, 1929 and located it about 4 miles above the mouth of the Innoko. However, he gave no details concerning its appearance other than to note that it was being rapidly washed away (Hrdlička, 1944, pp. 221-222). DeLaguna was told of the site in 1935, but did not go there (deLaguna, 1947, p. 77). Her map (p. 64), however, shows it situated inside the mouth of the Innoko.

Koserefsky must have been the most important settlement in the vicinity of the mouth of the Innoko by the time the Jesuits arrived in the winter of 1887, and in 1890 it had a population of 131 (Porter, 1893, p. 7). Ghost Creek was either a seasonal settlement or completely abandoned by this time and if there were people living at the location eventually chosen for the mission, the priest and brother make no mention of the fact. Regardless of its location, however, it was the village of Koserefsky that supplied inhabitants for the new mission settlement called Holy Cross. In fact, the post office established at the mission in 1899 was first called Koserefsky and not changed to the mission's name until 1912 (Ricks, 1965, p. 36) when most Indians had moved across the river.

It is impossible to say with certainty when the last families left Koserefsky, but the settlement is not mentioned by name in the mission diaries after March, 1908 (HCM diary, July 17, 1904-July 26, 1908, OPA/HCM, box 3). Movement onto mission land was doubtless the most important factor in the abandonment of the village, but action of the river must also be taken into account. Mission records indicate that between 1890 and 1897 200 ft. eroded from the bank of the river in front of Koserefsky (Koserefsky records, OPA/HCM, box 5).

HC-54. When Father Robaut and Brother Giordano inquired concerning a location for their mission, they were told of a place below Koserefsky and on the other side of the Yukon where there had been an old village and a creek flowed at the foot of a hill. In the spring of 1888, land was cleared for the first mission buildings (Giordano memoirs, OPA/Giordano, box 2) at the place called "Tihloyikeyit" (in the angle of a hill), a reference, presumably, to the hill at the upriver end of the new settlement (Jetté, *On the geographical names*



PLATE 6. The mission at Holy Cross (HC-54). Drawing by Guy Kakarook about 1895. Note that by this date a few Indian families had moved onto mission land (Smithsonian Institution, National Anthropological Archives).

of the Tena, OPA). Jetté further noted that an Eskimo name for Holy Cross was "Inreal'ra-meut" (ugly hill).

The Indian families who first moved from Koserefsky to the site of the new mission were doubtless those who, as at Anvik, had embraced, at least superficially, the teachings of the church. The first residents apparently moved to the upriver end of the mission site in the lee of the hill. Later these early members of the church's flock lived below the mission buildings near the river bank and the upriver location came to be associated with those who were lukewarm about the Catholic faith or rejected it entirely. By the fall of 1914, the entire "Upper Village," as it was called, appears to have been abandoned, implying, presumably, that all remaining inhabitants of Holy Cross were at least nominal church members (Koserefsky records, OPA/HCM, box 5).

From that time on Holy Cross became the dominant, and eventually the only, settlement in the area and its recorded population statistics are as follows:

1910	123	1930	337
(In addition to 92 children		1939	226
and 17 staff associated		1950	157
with the mission)		1960	256
1920 approx. 200		1970	199

(Harrington 1918, p. 20; U.S. federal census reports, 1931, vol. 1; 1952, vol. 1, pp. 51/6-8; 1973, vol. 1, table 6; HCM diary, July 27, 1908-Dec. 31, 1912, OPA/HCM, box 3).

At the beginning of the Innoko gold rush in 1908, Holy Cross was an important transport point for supplies going to miners on the upper Innoko and its tributaries. Following the decline of mining after about 1915, the community also declined in importance and in 1957 the Roman Catholic Mission was closed. Children attending the mission's boarding school were transferred to another church school at Glenallen.

Changes in the river channel, so frequent along the lower Yukon, greatly affected Holy Cross. At the time of Hrdlička's visit in 1929, the priests told him that within the past 25 years at least 900 feet had been cut from the bank in front of the mission (Hrdlička, 1944, p. 221). This rapid cutting partially destroyed the mission gardens which were an important element in the support of the school children. In addition, a large sandbar which had begun to form upriver from the mission and the community sometime after 1900, extended further down each year, eventually cutting off Holy Cross

from the main channel and making it difficult to bring in supplies. These factors were, among others, responsible for the closing of the mission and a decline in population which Holy Cross has experienced in the last 10 years.

HC-55. This site, one of the largest abandoned settlements on the Innoko, is located on the right bank at the point where the river empties into Red Wing Slough. At the upriver end of the site are at least six large, deep house pits near the bank of a small dried-up slough. There are also five collapsed cabins of more recent vintage at the opposite end. The river bank is building in front of the formerly occupied area and there are about 50 feet of mud flats covered with young willows in this area. Near the cabin remains is an extensive cleared area and the foundation logs of a large rectangular structure which may have been a store or warehouse.

This is probably the site that was known locally as Shageluk Point and it may have been occupied at least as early as the 1860's when two members of the Western Union Telegraph Company Expedition, George R. Adams and P. H. Smith, mentioned a large settlement "of over one hundred inhabitants" within the mouth of the Innoko (diaries of Adams and Smith, UA). Adams and Smith were members of Dall's party and the location of HC-55 suggests the latter's "Leather Village of the Russians" (Dall, 1870, p. 220). In the Holy Cross mission diaries for the 1920's there are numerous references to Shageluk Point and the resident trader, Alec Richardson (HCM diaries, July 1, 1919-Dec. 31, 1923; Jan. 1, 1924-Aug. 31, 1936, OPA/HCM, boxes 3-4). According to Anvik informants, the store was still in operation into the early 1930's and the site may have been abandoned at about that time. Some inhabitants are said to have moved up the Innoko to Old Shageluk and others to Holy Cross.

HC-56. In 1901 the construction of a railroad from Iliamna Bay on Cook Inlet to the Yukon was proposed. This ambitious project was intended to open the great inland region of western Alaska previously serviced only by circuitous water routes. The promoters of the Alaska Shortline Railway, as it was to be known, considered the Yukon Valley to have great agricultural potential, but believed that development would be impossible without a rail connection to the coast (The Alaska Shortline Railway and Navigation Co., 1903, p. 8; Railway routes in Alaska, 1913, pp. 90-91).

In October, 1901 a party of 20 men and a number of horses arrived at Holy Cross and set up a camp inside the mouth of the Innoko

River at a place later to be referred to as Railroad City, but known at the mission and Koserefsky as "the horse camp." (HCM diary, Oct. 1, 1900-May 12, 1902, OPA/HCM, box 2). The survey party stayed through the winter, but the proposed route was abandoned as being too far to the southwest to permit its use as a trunk line into the interior. The surveyors and their horses had departed from Railroad City by the following winter (Smith, 1915, p. 255; 1917, pp. 15-16).

Although a few Indians from Koserefsky and Shageluk Point may have lived at Railroad City following the departure of the survey crew, the site was of little importance until October, 1910 when, at the height of the Innoko gold rush, an enterprising entrepreneur approached the mission at Holy Cross with plans for a "future town" at or near the site of the former horse camp. He explained to unenthusiastic mission personnel that he wished to draw a population of Indians from Holy Cross and painted a glowing picture of a town with sidewalks, gardens, a fishery, well-built houses, curio store, hotel, station for the Northern Navigation Company, and regular wood-cutting contracts to provide fuel for the steamboats and employment for the Indians. The mission, fearing increased secular influence, was distinctly cool to these optimistic arrangements and, in fact, the grandiose plans apparently fell through rapidly before any construction was accomplished (HCM, July 27, 1908-Dec. 31, 1912, OPA/HCM, box 3).

The following year the Northern Commercial Company moved their warehouses and oil tanks from Holy Cross to Railroad City and renamed the "town" Red Wing. This established a new transfer point for freight bound overland to Iditarod or up the Innoko River (Kitchner, 1954, pp. 112-113). From that time on until at least the beginning of World War II, Railroad City was an important transshipment point for freight going up the Innoko to Flat, the only mining town to continue operations after the collapse of the Innoko gold rush. Informants stated that as many as 8 or 10 families of Indians lived at Railroad City and worked as longshoremen or in other capacities during the shipping season. There were a number of oil storage tanks and a large warehouse as well as residences and other structures at the site.

The site has been completely abandoned since the early 1950's. Dilapidated cabins are all that remain of what was once a bustling settlement during the navigation season in the years when traffic on

the Yukon and Innoko Rivers reflected the diverse requirements of gold mining operations in a remote area.

Settlement patterns between Anvik and the mouth of the Innoko River represent a combination of traditional patterning as reflected by Old Bonasila, Anilukhtakpak, Koserefsky, and probably a number of fish and trapping camps, and contact patterns reflected by the mission at Holy Cross and Railroad City. It is significant, however, that the mouth of the Innoko has been an important population center at least since protohistoric times. Anilukhtakpak played a significant role in the exchange of furs and other local products even before the Russian presence was felt on the Yukon. Its location at the mouth of the Innoko River close to much-used portages to the Kuskokwim River and to the Indian-Eskimo boundary assured its strategic importance to the trade with coastal peoples and therefore a place of considerable interest to the Russians (Zagoskin, 1967, p. 197). In the American period, the establishment of the Holy Cross mission and school and the discovery of gold on the upper Innoko and its tributaries assured the importance of this area and its settlements well into the modern period.

V

ANALYSIS AND CONCLUSIONS

Settlement Typology

Of the many published settlement pattern studies, two appear to be particularly applicable to an understanding of the settlement configuration of the Anvik-Shageluk Ingalik and the upper Innoko Holikachuk described in the preceding pages. K-C. Chang (1962) developed a typology for circumpolar societies that emphasizes the importance of the *annual subsistence region*. This is defined as the total area utilized by a group of people for subsistence throughout the year. If the ecological potential of the annual subsistence region is such that it can be occupied continuously over a long period of time, then the settlements within it are called *sedentary seasonal settlements*. These can be of two types: those which remain within the annual subsistence region at a permanent locale are called *sedentary seasonal settlements with permanent bases*, and those remaining within the limits of the annual subsistence region, but moving to a different locale after several years of occupancy are called *sedentary seasonal settlements with transient bases* (Chang, 1962, pp. 29-30).

Another useful socio-cultural classification is that of Beardsley *et al.* (1956) which formulates seven primary types of community patterning among non-herding peoples. One of these, the Central-Based Wandering type, is applicable to the area under discussion. For Beardsley and his colleagues, the Central-Based Wandering community is one "that spends part of each year wandering and the rest at a settlement or 'central base,' to which it may or may not return in subsequent years" (1956, p. 138). This type of community patterning is a form of compromise between wandering and sedentary life and is possible in areas where wild foods are unusually abundant and can thus be converted to storageable surpluses. Such communities are further characterized by socio-cultural cohesion during

the sedentary aspect and breaking into smaller segments or even nuclear families during the wandering phase. These smaller segments are economically self-sufficient at such times (Beardsley *et al.*, 1956, p. 138).

With reference to Chang's (1962) settlement classification, the Anvik-Shageluk area conforms to his definition of an annual subsistence region and the various sites described in the previous pages can be designated as sedentary seasonal settlements within this region. According to Osgood (1958, p. 30), the traditional Ingalik utilized three types of settlements depending on the season of the year: winter villages which were the permanent homes of their inhabitants, spring fishing and trapping camps, sometimes referred to as "canoe villages," to which people sledged their canoes in spring before the ice broke up, and summer fish camps. The latter were sometimes located directly in front of the winter villages, but they were always smaller because some families preferred to move to locations along the river to take advantage of good fishing sites.

When it comes to Chang's distinction between sedentary seasonal settlements with permanent bases and those with transient bases, certain problems arise. The question here concerns the length of time that a seasonal settlement must be occupied before it can be considered a permanent base. A number of village sites along the lower-middle Yukon and its tributaries can, with certainty, be identified as seasonal settlements with permanent bases since they were clearly occupied for a lengthy period of time and their inhabitants returned year after year even though they may have spent part of their time in settlements with transient bases.

On the Innoko River and Shageluk Slough at least nine sites (HC-3-10, Oph-1) can be considered as winter villages and thus identified as sedentary seasonal settlements with permanent bases. Three others (HC-1, 11, 13) may belong in this category, but there is insufficient evidence to be certain. Two sites (HC-2, 12), only one of which was intact at the time of this study, definitely appear to have been fish camps and thus can be identified with certainty as sedentary seasonal settlements with transient bases.

On the Yukon in the vicinity of Anvik village, only that settlement (HC-14) served as a permanent base, although two additional sites (HC-15, 18) may have belonged in this category at one time or another. Lower Village (HC-18), for example, was apparently a permanent base after 1927, but may have been a fish camp earlier. Two

sites (HC-16, 17) were presumably fish camps and thus transient bases. The former was actually the location of a trading post, but there are indications that, like Lower Village, it was once a site for summer fishing. Along the Anvik River only Red Mountain (HC-23) served as a permanent base. The others (HC-19-22, 24-26) were either summer fishing sites, winter trapping camps, or both.

Like the Anvik River, the Yukon above Anvik village was, for the most part, inhabited only seasonally. Of the 20 sites in this area only Grayling (HC-35) appears to have served as a permanent base, although Vazhichagat (Ukt-3) may also belong to this category. The remaining were clearly summer fish camps utilized for varying periods of time. Below Anvik village on the Yukon the situation is similar although there were fewer settlements of any type. Four sites have been identified as fishing or trapping camps (HC-44-46, 49-50), while Old Bonasila (HC-47) and New Bonasila (HC-48) were definitely permanent bases.

In the Holy Cross-mouth of the Innoko area the settlement pattern was, as previously noted, complicated by changes in the river bank and the impossibility of identifying definitely some settlements named in historical sources. Nevertheless, it is clear that this area was the major population center in the region since five of the six sites (HC-51-55) were important winter villages. The sixth (HC-56) probably falls outside the categories being considered here since it was originally occupied in response to the presence of a railroad construction crew in the area.

According to the breakdown given above, there may have been as many as 27 settlements with permanent bases in the area of this study and 33 with transient bases. It should be emphasized again, however, that the distinction between the two types of settlements is not always clear. Many sites identified as seasonal settlements with transient bases may have been occupied more or less continuously for many years even though they were never anything more than fishing or trapping camps. A good example of this is HC-43, a fish camp located at Hall's Rapids below Fox Point Island on the Yukon. Although probably never a winter village, it appears to have been occupied seasonally at least as early as 1870 and until sometime in the mid-1930's or even later. Thus it could easily qualify as a permanent base. Nevertheless, there would appear to be a clear distinction between the major villages in the area and those of strictly seasonal and therefore secondary importance. It is clear that the Ingalik occupied their fishing and trapping sites for shorter

periods, both seasonally and over a continuous period of time, than they did their winter villages, many of which were occupied continuously throughout all or most of the contact period.

The Central-Based Wandering type of settlement pattern defined by Beardsley and his colleagues closely fits the seasonal cycle of the Ingalik and Holikachuk Athapaskans. This form of patterning was possible, of course, because of the riverine emphasis that characterized Indian culture in this area. At the same time, however, the type of inland hunting practiced by the nineteenth-century inhabitants of the lower-middle Yukon necessitated the breaking up of the community into small functional groups that wandered over the interior in search of caribou, moose, and other wild game. These small groups, in some cases not more than a single nuclear family, also functioned as trappers throughout the proto-contact and contact periods. It is probable that the advent of trapping brought about a more complete segmentation of the communities than had occurred under aboriginal conditions. However, few sites identified with any certainty as trapping camps could be located during the surveys reported in this study. Most were doubtless situated along small creeks flowing into the larger tributaries of the Yukon.

Houses and Community Patterns

A typical Ingalik winter village consisted of a large *kashim* which served as a ceremonial house, men's social center, and workshop, and a row of semi-subterranean residences. Behind the houses were numerous caches for storing dried fish and other food, while elevated racks for sledges and boats were situated between and in front of the residences. The *kashim* was the most impressive structure in every winter village, as is evident from Zagoskin's (1967, p. 193) description of the structure at Anilukhatakpak quoted in the previous chapter. The most common form of dwelling in the summer fishing camps was above ground, of frame construction, and with walls made of sheets of spruce or birch bark. Temporary shelters of spruce poles and boughs were used during brief stays in the "canoe villages" (Osgood, 1940, pp. 290-318, 323-328).

In 1843-1844 when Zagoskin explored the Ingalik country he visited the nine winter villages listed below, all but one of which have been described in the preceding pages, although some of the identifications must be considered tentative (Zagoskin, 1967, p. 307).

<u>Settlement</u>	<u>Houses</u>	<u>Population</u>
Inselnostlende	2	33
Khuingitetakhten	3	37
Iltenleyden	6	100
Tlëgozhitno (Shageluk)	3	45
Khuligichagat (Holikachuk)	5	70
Vazhichagat	5	80
Anvig (Anvik)	5	120
Makki (Bonasila)	3	44
Anilukhtakpak	8	170
Total	40	699

These figures indicate an average occupancy of a little more than 17 persons per house and suggest that a winter village with eight or more houses should be considered very large indeed. A later observer agreed that anywhere from 15 to 20 individuals, usually members of at least two nuclear families, lived in a traditional semi-subterranean winter house (Chapman, 1900, p. 6).

In Ingalik winter villages during the early historic period the focal point for community life was the *kashim*. Always the largest structure in a settlement, it was the center of ceremonial life, the place where many social obligations were fulfilled, and where men and boys spent much of their time. Another characteristic of the *kashim* was the absence of women and young girls, who could enter the structure only on errands and to bring food. Women played no part in the various *kashim* activities (Osgood, 1958, pp. 33-38).

Although *kashims* must have been impressive structures in occupied settlements, they are sometimes difficult to distinguish from large houses once the roofs have collapsed and they have become filled with sod and overgrown with grass. Also many sites in the area of this study have been cut away by the river or are so heavily overgrown with vegetation that an accurate determination of the number and purpose of structures was impossible. Thus the exact number of villages with *kashims* in the Anvik-Shageluk area could not be determined with certainty. On the lower Innoko River and Shageluk Slough the major, long-established winter villages of Iltenleyden (HC-7), Old Shageluk (HC-8), and Holikachuk (HC-9) all had *kashims*. The remains of a structure of this type was also noted at HC-10 which, as previously noted, may have been a part of Holikachuk; deLaguna identified a *kashim* at HC-11.

On the Anvik River and in the immediate vicinity of the river mouth there were *kashims* at Anvik village (HC-14), Old Anvik (HC-15), and, according to deLaguna, at Red Mountain (HC-23), the only

winter village on the Anvik River. Along the Yukon from Anvik to the confluence with Shageluk Slough the only settlement where a *kashim* was identified with certainty by deLaguna was at Grayling (HC-35), although one was reported to have been located at Anvik Rapids (HC-43). If Vazhichagat (Ukt-3) was as important a settlement as Zagoskin believed it to be, there was probably one there too. Below Anvik on the Yukon there were *kashims* at Old Bonasila (HC-47), reported by Glazunov and Zagoskin; New Bonasila (HC-48), reported by deLaguna; Anilukhtapak (HC-52), described by Glazunov and Zagoskin; and Koserefsky (HC-53) where, as previously noted, it served as a home for Father Robaut and Brother Giordano for a short while after their arrival in the area in the winter of 1887.

At various times during the nineteenth and early twentieth centuries there may have been as many as 15 villages with these structures. It is questionable, however, whether even in Zagoskin's time there was a *kashim* in every winter village. If the site identifications in Chapter I are correct, Khuingitetakhten (HC-3) and Inselnostlende (HC-6) apparently lacked ceremonial houses and the same may also have been true of other small settlements not noted by the Russian explorer. Later, when the *kashim* declined in importance, these structures may not have been built in some newly established winter villages.

E. W. Nelson, who traveled on the Yukon and Innoko rivers during the winter of 1880, believed that the *kashim* was a recent innovation in this area, having been borrowed from neighboring Eskimos (VanStone, 1978, pp. 45-46, 71). This is probably not an accurate statement but, in fact, the definite existence of prehistoric structures of this type in settlements throughout the area has not been documented. In some respects, the *kashim* in a village on the upper Innoko described and illustrated by Nelson (VanStone, 1978, pp. 45-46 more closely resembles the Eskimo *kashim* in southwestern Alaska (VanStone, 1968, pp. 252-258; 1970, pp. 33, 35-38) than it does the Ingalik *kashim* described by Osgood (1940, pp. 290-302).

The cycle of masked dances and ceremonies that were held in the *kashim* were the focal point of Ingalik religious and social life. As might be expected, however, they created ambivalent feelings in the minds of Russian Orthodox, Episcopalian, and Roman Catholic missionaries. On the one hand, such ceremonies were considered wasteful in terms of food consumed and gifts distributed, and, of

course, generally inconsistent with Christian beliefs. On the other, the missionaries were impressed with the solemnity and sincerity of Indian participants and felt that in some ways the ceremonies brought out much that was good in Indian character. Nevertheless, as early as 1891 Roman Catholic priests noted that the young people were beginning to lose some interest in the ceremonial cycle (Judge, 1907, pp. 54-55). This may have been due in part to efforts by the Russian Orthodox Church over the preceding 50 years, but the various secularizing influences that were already making themselves felt in the Yukon Valley were doubtless primarily responsible.

The villages of Holikachuk, Anvik, and Old Shageluk were closely bound by the series of annual ceremonies held in each community to which residents of the other two were always invited. According to one source, some ceremonies were not held as early as 1905 and it is clear that mission influence was the reason (deLaguna, 1936, p. 569). At Anvik in particular the old ceremonies continued to wither away and those that remained lost at least some of their religious connotations. Some were dropped because they could no longer be performed fully and properly. At Old Shageluk and Holikachuk, however, a reasonably complete cycle of festivals persisted into the 1930's (Parsons, 1921-1922, p. 71; deLaguna, 1936, p. 569).

The decline of the Ingalik ceremonial cycle obviously affected the importance and function of *kashims* in the various settlements. As workshops and lounging and sleeping places for men, they would continue to be important for some time to come, but once the ceremonial aspects of *kashim* activities were diminished, the structure as an institution in Ingalik life would never be the same again. The *kashims* at Old Shageluk and Holikachuk continued to be used as meeting houses until the villages moved in 1966 and 1963 respectively. The structure at Anvik was destroyed by fire in the 1940's and not rebuilt.

Just as mission influence affected the *kashim* and its role in community life, so it was also responsible for major changes in house construction. At Anvik, for example, the Episcopalians claimed credit for the gradual abandonment of the traditional semi-subterranean house and acceptance of above-ground log structures. At the time of Chapman's and Parker's arrival in the village, the only log houses to be seen in the area were those belonging to the trader, S. A. Fredericks, which were purchased by the missionaries, and a single log cabin belonging to the Alaska Commercial Company. In fact, Chapman suggested that the Anvik Indians may have

learned the rudiments of such construction from Fredericks. Although it is certain that at least some Anvik men were familiar with log construction before this time, the fact remains that such familiarity must have had little impact since as late as 1892 all the inhabitants of Anvik lived in traditional semi-subterranean houses of the type described in considerable detail by Osgood (1940, pp. 302-312); it was only in the fall of that year that the first log cabins were built in the Anvik Point settlement (Chapman, 1893, pp. 383-387).

Within three years, however, nearly one-third of the villagers lived in log structures and those that adopted Episcopalian Christianity, at least superficially, moved across the river and built their cabins on mission land (Chapman, 1896, p. 523). Since the Anvik Point site, as noted previously, flooded frequently in spring, this doubtless provided an additional incentive for the inhabitants to move into log houses across the river. By 1897 fully two-thirds of the families residing in Anvik had log houses (Chapman, 1898, p. 168).

It is clear that Ingalik settlements underwent considerable change in the last decade of the nineteenth century as a result of the acceptance of log houses and the decline of the *kashim*. The ceremonial house and its many, varied activities symbolized the large, closely-knit community. With the collective ceremonies in decline, a growing interest in Christianity with its emphasis on individual salvation, and economic changes which stressed the role of the individual wage-earner, some families may have felt it unnecessary to continue to reside in the larger settlements. The smaller log cabins housed individual nuclear families as opposed to the traditional winter houses inhabited by two or more such families (Osgood, 1958, p. 157). Multiple factors including missionary influence and involvement in trapping and wage labor thus resulted in major changes in the community pattern.

Population Changes

The earliest population figures for the Anvik-Shageluk area are those of Andrey Glazunov who estimated that there were approximately 1,000 inhabiting the villages he visited or was told about during his explorations in 1834 (VanStone, 1959). Zagoskin's previously noted enumeration of 699 individuals in 1843 includes settlements on the Innoko River not visited by Glazunov (Zagoskin, 1967, p. 307). The lower figure has been interpreted as reflecting the

severity of the smallpox epidemic which swept western and southwestern Alaska in 1838 and 1839. If Glazunov had visited the Innoko and if the settlements there were larger in 1834 than in 1843 in the same proportion as those on the Yukon, then it is conceivable that the entire Anvik-Shageluk area might have supported a population as high as 2,000 persons at the beginning of direct contact with Russian traders.

Some idea of the effect of the smallpox epidemic on Ingalik population can be achieved by taking a closer look at the population figures obtained by these two Russian explorers. At Anvik, Glazunov counted 10 houses which, based on his population figures for other villages, may have been inhabited by as many as 240 persons. Nine years later at the time of Zagoskin's visit there was, as previously noted, a population of 120 living in half as many houses. Similarly, for Old Bonasila, it will be remembered, Glazunov enumerated 120 persons living in five houses, while Zagoskin counted 44 people inhabiting three residences. Glazunov's figure of 700 for the Anilukhtakpak area seems large even though the explorer was clearly referring to at least two communities. In any event, Zagoskin, in 1843, estimated a population of 170 for Anilukhtakpak alone (VanStone, 1959, pp. 43-45; Zagoskin, 1967, p. 307).

If the population estimates of the two explorers are reasonably accurate, they show clearly that the Yukon Ingalik villages lost fully two-thirds of their inhabitants as a result of the smallpox epidemic, a much higher mortality rate than is apparent from the meager information available for other areas of western and southwestern Alaska. The effects of this disaster on Indian life can only be surmised since precise accounts are lacking. Nevertheless, we can assume that sickness was accompanied by starvation and serious social and economic disruption. The reduced population was forced to reorient itself with reference to its modified traditional lifeways at the very time when significant changes were being introduced from without. Although the Ingalik population never recovered from the effects of this epidemic, it is significant that apparently none of the major Yukon River winter villages were abandoned at this time.

Population estimates for the remainder of the nineteenth century are not particularly reliable. The tenth federal census in 1880 reported an approximate figure of 413 including a dubious 150 in "Chageluk settlements" and 10 years later the eleventh federal

census recorded 476 (Petroff, 1884, p. 12; Porter, 1893, p. 7). During the first 30 years of the present century, however, more accurate census data were gathered by John Chapman. In 1898 he enumerated 652 in the Anvik-Shageluk area, while in 1900 the figure was 562. A decline to 452 in 1914 was attributed to a severe influenza epidemic which swept the lower Yukon and adjoining areas in the summer of 1900 (Chapman, 1898, p. 167; 1931, pp. 398-400). Populations for the following 10 year intervals were as follows:

<u>Year</u>	<u>Population</u>
1930	504
1939	505
1950	454
1960	653
1970	588

(U.S. federal census reports, vol. 1, 1931; 1952, pp. 31/56-58; 1963, pp. 3/10-11; 1973; table 6).

It should be remembered that even the most carefully collected census figures were never more than an approximation of the population of an area like the lower-middle Yukon. Seasonal movements of people are characteristic and the number of inhabitants in any village always varied greatly depending on the time of year that a count was made. A long-time, year-around resident like John Chapman was in a better position to make accurate population estimates than federal enumerators whose visits to the area at widely separated intervals were, of necessity, brief. Nevertheless, it seems clear that Osgood (1958, p. 30) was correct when he noted that the population of the Anvik-Shageluk Ingalik and their closest neighbors has, since the 1840's always been "nearer to five hundred than a thousand."

Distribution of Settlements

As might be expected, the physical environment has been a major factor in determining the distribution of settlements throughout the Anvik-Shageluk area. Along the Yukon from the entrance to Shageluk Slough to the mouth of the Innoko River, the right bank is consistently high and as a result, all but a few sites and all major settlements are located on this side of the river. Above Anvik the steep right bank is broken at intervals by small open areas, usually at the mouths of tributary creeks, where fish camps have been located since the beginning of the historic period. Only at the mouths of the Anvik River and Grayling Creek, however, are these

flat open areas of sufficient size to have accommodated winter villages. Below Anvik the right bank of the Yukon is somewhat lower and although areas suitable for human occupation are fewer, those that exist are larger. As a result, the important winter villages of New Bonasila, Old Bonasila, and Anilukhtakpak were located in this area together with the modern settlement of Holy Cross. Koserefsky and Vazhichagat were the only significant left bank settlements. The rapid changes to which this bank of the Yukon is subject are well illustrated by the fact that all indications of the presence of both villages were apparently obliterated within a relatively short span of years.

Along the lower Innoko River few locations suitable for human habitation are immediately apparent; there are many open flat areas but few high banks. Only at the recently chosen location for New Shageluk has it been possible to utilize a gradual rise from the river bank and the sloping side of a low hill. All other sites are located where flooding was a distinct possibility, even a probability, each spring. The lower Anvik River resembles the lower Innoko in this respect, but the problem of settlement location is different since with the exception of Red Mountain (HC-23), there were no winter villages located along its banks. Fish camps were located where fences could be most profitably constructed. The fact that fish taken above the mouth of Yellow River, an Anvik tributary, are not considered fit for human consumption or for dog food because of their emaciated condition served to limit the placement of these camps. The small sites reported further up the Anvik were all apparently associated with winter trapping.

The location of many camps and settlements throughout the Anvik-Shageluk area suggest that the possibility of spring flooding, although doubtless of some concern to the inhabitants, was not of sufficient importance to render a location unsuitable for human occupation. Floods, often severe, are particularly likely to occur above Holy Cross. The Yukon narrows in this area and cakes of moving ice jam and effectively dam the river, forcing water back up the many tributary creeks and streams. Neither informants nor historical sources record the abandonment of any settlement because of recurrent flooding. Only in recent years when the village of Old Shageluk was relocated does this factor seem to have entered into the decision to move. Although particularly low places may have been avoided when possible as locations for villages and camps, if other factors such as good fishing, access to drinking

water, strategic location in terms of travel and trade, etc. were present, periodic flooding appears to have been accepted as an annoying but inevitable feature of living along the banks of a river.

Environmental factors were doubtless the most significant determinants of settlement distribution in the prehistoric period, but during protohistoric and historic times historical factors have been of even greater importance. It is likely that the most significant shifts in settlement location in response to the fur trade took place before the Russians entered the Yukon Valley and were the result of adjustments made necessary by participation in the Siberia-Alaska trade. Even a settlement like Anvik, presumed to be of considerable antiquity, may owe its present location to the strategic necessity of having a settlement at the beginning of the most important route to Norton Sound. Anilukhtapak was ideally situated to involve inhabitants of the Kuskokwim and Innoko rivers in the coast-interior trade. It will be recalled that Eskimos from the Kuskokwim were at Anilukhtapak at the time of Glazunov's visit in the winter of 1834 (VanStone, 1959, p. 45). Similarly, Zagoskin mentioned the strategic location of Vazhichagat with reference to the creeks tributary to the upper Anvik River (Zagoskin, 1967, p. 191). Although clear proof is lacking, it may not be an exaggeration to suggest that the early contact settlement pattern in the Anvik-Shageluk area reflected almost entirely the requirements of the coast-interior trade. If this were indeed the case, it could mean that the major settlements in the area do not predate the beginning of the nineteenth century and thus had been occupied for only a few years at the time they were visited by Glazunov and Zagoskin.

Whatever may be the accuracy of these speculations, it is clear that the distribution of settlements along the lower-middle Yukon and its tributaries was relatively little affected by the advent of direct contact with Russian traders. The Russians established no trading posts in Ingalik territory and, in any event, the profitable trade relations which the Indians enjoyed with the Eskimos of Norton Sound were more important than their relations with the Russian-American Company's posts at Mikhailovskiy Redoubt, Unalakleet, and Ikogmiut. There was little incentive to relocate settlements in order to participate in trade with the Russians, particularly since both Russian traders and Norton Sound Eskimos traveled extensively throughout the Ingalik area to obtain furs.

At the beginning of the American period, a trading post was established at Anvik (Raymond, 1873, pp. 170-171) and by 1910

traders were resident more or less continuously at Old Shageluk, Holy Cross, and Holikachuk. For the most part, the presence of traders in these communities reinforced the importance of established centers and reduced the mobility of the population. It is apparent, therefore, that the fur traders, although important agents of change, did not have a significant effect on the distribution of settlements. The elimination of the Siberia-Alaska trade toward the end of the nineteenth century and the resultant dependence of the Ingalik on materials received from American trading posts might, in the long run, have affected settlement pattern changes. The presence of free traders in the area, however, together with additional, more significant agents of change, reduced the potential of the fur trade to affect settlement location.

Like the Russian-American Company, the Russian Orthodox Church did not locate in Ingalik territory. The priest stationed at Ikogmiut after 1845 visited the Ingalik villages at infrequent intervals. The Episcopalians and Roman Catholics, however, established themselves at Anvik and Holy Cross, the latter a new community which, as noted in Chapter IV, eventually absorbed the population of several settlements in the vicinity of the mouth of the Innoko River. These missions, therefore, must rank as the most significant historical determinants of settlement distribution in the late nineteenth century. Together with the schools they established, missions brought about the only major changes in Ingalik settlement patterns to have occurred since the advent of the Siberia-Alaska trade at the end of the eighteenth century.

The intense competition between Christian missionaries and native shamans who believed, with good reason, that their positions of authority within their communities were in jeopardy occasionally threatened to disrupt community life. At Anvik in 1904, for example, friction between John Chapman and the shamans increased the polarization of the community to the point where one particularly strong shaman, Nikolai Doctor, founded a separate village about a mile from the mission (Chapman *et al.*, 1904, pp. 916-917). Although there are no other examples of shamans founding separate settlements, it is probable that certain subsidiary villages may have been occupied longer than would otherwise have been the case because of the presence of an influential shaman. As noted in the previous chapter, New Bonasila (HC-48) may have been abandoned at the time of the death of an important shaman. An influential shaman at Koserefsky apparently was successful in persuading a number of his

adherents to continue residence in that community (HCM diary, May 13, 1902-July 16, 1904; July 17, 1904-July 26, 1908, OPA/HCM, boxes 2-3).

Gold rush activity, which began on the lower Yukon in the summer of 1897 and continued until about 1920, brought large numbers of Euro-Americans into the country for the first time. The Yukon was an important route to the Klondike diggings and, later, to discoveries on the upper Innoko River. The presence of large numbers of wood-burning riverboats on the Yukon and Innoko made it possible for the Indians to find employment as wood choppers supplying fuel to these vessels. Although a large number of wood camps sprang up along the river, most of them were not located near existing winter villages. Indians were attached to these camps during the late winter and spring, but there is little indication that the camps, or any other aspect of gold rush activity, had a sustained affect on settlement patterns.

As in most areas of Alaska, services such as education and health care were first offered to the Ingalik by missions and were the means by which these organizations successfully established themselves. Government-sponsored medical services on the lower-middle Yukon began about 1910 and public education in 1906. Following the severe smallpox epidemic of 1838-1839, epidemics of various introduced diseases, particularly influenza and measles, took an almost yearly toll among the Ingalik and affected settlement patterns, particularly on the Innoko River. As previously noted, villagers at Anvik occasionally moved away and established at least one settlement in an attempt to escape an epidemic. Although settlements established for this purpose probably did not last long, they were nonetheless important to the population history of the Anvik-Shageluk area.

Public day schools remained in the shadow of the mission boarding schools for some years, but the steadily increasing importance of the federal schools gave the government control over the lives of the Indians to an increased extent. Families were strongly encouraged to keep their children in school from September through May and these sanctions applied to everyone, whereas the influence of the boarding schools was strong only among those who chose to enroll their children. Families who failed to send their children to school or withdrew them to go to trapping or fish camps risked the official disapproval of a powerful force for change in the community. This kind of pressure may have been effective in eliminating small settle-

ments and consolidating the population in the larger villages where the schools were located. On the Innoko River, for example, a number of small settlements appear to have been abandoned between 1920 and 1940 and Old Shageluk and Holikachuk, both with schools, soon became the only occupied villages.

Technological innovations also played a role in settlement distribution. The introduction of the fish wheel, which was in general use on the lower-middle Yukon by 1913 or 1914 (Chapman, 1913, p. 50), changed summer settlement patterns to some extent as families sought good locations for their wheels, locations that often were not suitable for traps and nets. Another significant innovation which greatly affected summer subsistence and residence was the gasoline-powered outboard motor. These motors were in use by 1918 and eliminated most of the arduous effort previously associated with river transportation. According to informants, some Innoko River residents maintained fish camps on the Yukon at considerable distances from Old Shageluk after the introduction of the outboard motor, but the location of fish camps of the Yukon River Ingalik do not seem to have been affected to the same degree.

Settlement Pattern Continuity and Change

It is apparent that the major Ingalik settlements on the Yukon and Innoko rivers continued to be important into the modern period. The settlement of Holikachuk, inhabited by members of that Athapaskan group, also retained its importance almost up to the present time. This stability seems less significant, however, when it is recalled that during the nineteenth and early twentieth centuries there may have been, at one time or another, as many as 26 settlements with permanent bases in the Anvik-Shageluk area. Since there are only four at the present time, there has obviously been a considerable coalescence of population. Some of the reasons for this have already been considered and others will be examined in this section.

The greatest amount of coalescence has taken place on the lower Innoko River where nine and possibly 12 settlements may have been winter villages, but only one remains. The significance of the school at Old Shageluk in this respect has been suggested. Of equal importance, perhaps, has been the marginal position of the Innoko since the decline of gold mining on the upper river about 1920. Although informants' statements and the historical record are not as detailed as might be desired, it would appear that most of the sites on the lower Innoko were abandoned by 1930 or shortly thereafter, a time that coincides with the decline of mining and the

serious influenza epidemic of 1918-1919. Some of the inhabitants of these settlements moved to Old Shageluk and others to Yukon River villages. Although Old Shageluk and its newer counterpart have continued to maintain a sizeable population, the inhabitants of Holikachuk moved to the Yukon when the inaccessibility of the old settlement appeared a hindrance to the desire of its inhabitants to benefit from improved communication facilities in west-central Alaska. The gold rush itself may not have changed Innoko settlement patterns, but the river was certainly a more isolated and thus less favorable place to live once regular river traffic had disappeared for good.

At the mouth of the Anvik River, the settlement pattern has remained relatively consistent throughout the period covered by this study, largely because of the importance of Anvik village and its strategic location as a "gateway" to the Anvik-Shageluk region. Other settlements have existed in the immediate area but none have lasted for any length of time and their inhabitants have invariably returned to the main settlement. Throughout the historic period the Anvik River has served primarily as the location of fish camps and the prohibition of subsistence fishing on the river which went into effect about 1930 has effectively prevented seasonal residence along the river since that time.

Another area where fish camps predominated was along the Yukon from Anvik to the confluence with Shageluk Slough. Here were located camps occupied by Ingalik and Holikachuk Indians, but with the possible exception of HC-43, there were no winter villages along this stretch of river. Of the various regions into which the area covered by this study has been divided, this one has maintained the most stable settlement pattern throughout the historic period.

Along the Yukon below Anvik a definite coalescence of population has been documented and since the 1930's there have been no settlements other than fish camps along this stretch of river except the mission and village at Holy Cross. Both Bonasila and Koserefsky would appear to have succumbed to the continually increasing importance of the mission centers at Anvik and Holy Cross as did the settlement of Shageluk Point (HC-55) inside the mouth of the Innoko. As the twentieth century progressed, these missions increasingly controlled communication with the outside world. Once river traffic had declined, the attraction of these centers was strong indeed.

Settlement Pattern Determinants - A Comparison

Between 1964 and 1969 I carried out studies of nineteenth and early twentieth century settlement patterns along the Nushagak River, its tributaries, and adjacent areas of Nushagak Bay in southwestern Alaska (VanStone, 1971). The inhabitants of this bay and river system, the Aglegmiut and Kiatagmiut Eskimos, were influenced by the fur trade, the Russian Orthodox Church, and the Moravian Church which established a mission station near the trading center of Nushagak in 1886. The influence of the latter, however, was never great and the mission was abandoned in 1906 (VanStone, 1967, pp. 45-46). Of greater significance than either Christianity or the fur trade for the acculturation of the Eskimos of the Nushagak River region was the commercial salmon fishing industry that began to develop in Bristol Bay during the 1880's (VanStone, 1967, pp. 63-82). In the Nushagak region, as in the area occupied by the Ingalik and Holikachuk Athapaskans, historical events were more important than environmental factors in determining the distribution of settlements between 1800 and the present. Although involvement in the fur trade greatly affected the subsistence patterns in both areas, it is questionable whether it brought about any greater change in Nushagak area settlement patterns than it did on the Yukon. In both areas the major river villages were sedentary seasonal settlements and there is no reason to think that the shift to a trapping-trading economy changed this. The riverine orientation of the Ingalik continued to focus their attention on the Yukon and Innoko even though the Indians were dispersed during the trapping season. As in the Nushagak area, involvement by the Indians of the lower-middle Yukon in the fur trade may have reduced the amount of time which the people spent in their river villages, but not enough to bring about major shifts in the settlement pattern.

In the Nushagak River region a proliferation of small settlements occurred between 1880 and 1940 resulting in a more even spread of population throughout the region. Although this trend toward proliferation could not be interpreted with assurance, it appeared to be tied in with the growing commercial fishing industry and a significant movement of people into the Nushagak region from other parts of southwestern Alaska. Also during this period the river villages became more sedentary and less seasonal in their occupation as the Eskimos became more involved in fishing and less dependent on hunting and earnings from trapping.

On the lower-middle Yukon there was no indigenous commercial development comparable to the commercial fishing industry in Bristol Bay. The effects of the gold rush, although impressive for a while, were transient since there was little actual mining in the vicinity of Ingalik villages. Although a certain coalescence of population may have taken place as a result of the gold rush, there is no evidence that any major winter village was abandoned for reasons related to mining activity with the possible exception of settlements on the upper Innoko which were close to the actual mining area.

On the Nushagak and its tributaries after 1900, epidemics, particularly the influenza epidemic of 1918-1919, sharply reduced the population and was responsible for the abandonment of some settlements. This was true on the lower-middle Yukon as well, particularly, as previously noted, along the lower Innoko River. Although Russian Orthodox chapels had been built in some Nushagak area communities before the turn of the century, churches did not influence settlement patterns until the 1920's. The effects of the establishment of schools and government agencies were not significant until even later. Among the Ingalik, however, the effects of these agents of change can be documented much earlier and were, in fact, the major determinants of settlement patterns.

A basic continuity of settlement distribution existed throughout the historic period in both areas in spite of changes brought about by the various agents of change that have been mentioned. On the Innoko this continuity is represented by the settlements of Old Shageluk (HC-8) and later New Shageluk and Holikachuk (HC-9). On the Yukon it includes Grayling (HC-35), really an extension of Holikachuk, Anvik (HC-14), and Holy Cross (HC-54).

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